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PROTEIN AND AMINO ACID THERAPY

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IT is only within the past decade or two that the importance of protein intake has become appreciated. In discussing this subject, it will be necessary to consider both protein and its building stones, i.e., amino acids, which normally furnish the medium of exchange between protein in the food and body protein, as well as between various body proteins.

The subject of protein and amino acid therapy has a wider interest than merely one of nutrition inasmuch as many surgical conditions result in a loss of blood and exudate, which are essentially protein-containing fluids. In this sense also, transfusions of blood and plasma, which are also protein-containing solutions, come under consideration in the discussion of protein and amino acid therapy.

General Considerations

The importance of protein may be expressed by a statement attributed to Rubner that "protein contains the magic of life, ever newly created, ever dying." This dynamic view of protein metabolism was prophetic, for it was only in the past decade or two that the same conclusion was reached by Shoenheimer and his co-workers, whose fundamental studies were based on the employment of the latest tool of biological research, the labeled or isotopic molecule, which is one of the useful contributions of nuclear physics, whose more spectacular application resulted in the atomic bomb.

It is important to realize that proteins are quite diverse in their function, varying from the circulating plasma proteins, the hemoglobin imprisoned in the red cells, the protoplasm of tissue cells, to the hormones and enzymes, all protein molecules. Secondly, proteins vary in size and shape, from the relatively small insulin molecule to the tremendous globulin, which has a molecular weight of 250,000. Shape varies from the relatively spherical contour of albumin to the long, stringy appearance of the fibrous proteins such as gelatin and keratin. Thirdly, proteins vary in their amino acid composition, which is probably the reason why one protein must be broken down to amino acids before another protein can be synthesized.

Amino acids circulate in the blood like glucose probably because of the fact that they act as a medium of exchange between the proteins of the food and the various proteins within the body. The actual amount of amino acids circulating in the plasma is similar to the amount in glucose, i.e., about 80 mg. per 100 c.c. Changes in their level have received rather limited study. If there is any analogy with the information contributed by the study of the glucose level in the blood, a great field for future research should follow further investigation of the concentration of amino acids in the blood.

Historical Survey

In L. B. Mendel's book on nutrition, *The Chemistry of Life,* there is an interesting discussion of the history of the various food elements. It is only within the past hundred years that the Hippocratic idea of a universal food element was shown to be untrue. Prout in 1830 first showed that there were at least three different food elements, i.e., carbohydrate, protein and fat. Mul-

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der, a Dutch biochemist, first gave protein its name, although Magendie first noted that protein is characterized by its content of nitrogen, not possessed by carbohydrate or fat. This contribution of Magendie, however, was overshadowed historically by the studies of Lavoisier, who preceded him and Liebig, who followed him.

The early workers in nutrition felt that protein was a very important and essential element in the diet, an idea which remained unchallenged until the work of Chittenden, who not only showed that a low protein intake in normal individuals was consistent with health, but who also claimed that any increase in the protein intake was detrimental to general health. This idea was supported by the traditional view that a high protein intake is harmful in diseases of the kidneys. Because of this and other reasons, most physicians in the early part of this century tended to neglect protein as an essential part of the diet, particularly in disease.

It was only after World War I that the importance of protein was re-emphasized. This change was based upon observations of Maver and of Kohman, of Mendel and Peters, and later of Weech and others, who showed that nutritional edema was directly connected with a fall in the plasma proteins (hypoproteinemia). In 1933 Jones and Eaton first showed that postoperative edema was due to protein depletion. In the past ten years numerous observers have shown beyond question the importance of protein depletion in the production of postoperative difficulties of many kinds. We may accept as proven the importance and even the essential nature of protein intake in the maintenance of normal function, particularly during and after operation.

This does not mean that the other elements in the diet, i.e. water, energy, vitamins and salts, are not also important. Indeed, it is only by a consideration of all of them that normal physiological function may be maintained. However, the importance of calories and vitamins in particular has been so emphasized in recent years that protein needs have slipped into the background, and it will be part of my purpose to bring forward into more realistic juxtaposition its relation with the other elements. An adequate intake of this element is necessary in order to maintain normal function of surgical, and indeed, of all patients.

Relation of Body Protein to Plasma Albumin

Plasma albumin is the most important fraction of the plasma proteins as far as the physiologic function of the circulating plasma is concerned, and is involved in nutritional and other types of deficiency. Yet this protein comprises a relatively small total amount, i.e., about 150 gm. There are by contrast many thousand grams of protein in the rest of the body. The quantitative relationship between albumin and the rest of the body proteins seems to be a relatively constant one during conditions of depletion as well as during repletion. This is an important consideration because it explains the reason why such tremendous amounts of protein are necessary to correct an albumin deficiency in the blood, i.e., so much is required to replace body protein at the same time as the plasma albumin is being corrected. From the data of Weech as well as from data obtained in our laboratory, this relationship is expressed by a ratio of thirty to one. In other words, in a nutritionally protein-deficient individual, only 1 gm. out of every 30 gm. ingested and assimillated is available for the correction of hypoproteinemia. The rest is required for the correction of deficiencies in the rest of the body.

The Recognition of Protein Deficiencies

Exact laboratory methods for the recognition of protein deficiencies have been used by many workers in the field. The results may be studied by those interested in the mechanisms. They are usually too complicated for ordinary clinical use. Moreover, these laboratory methods have been used so extensively and have been correlated with such definite clinical manifestations that the average clinician need not worry about carrying them out. These laboratory methods will be merely mentioned but not described. They are (1) determination of nitrogen balance, (2) biopsy of the liver with study of its histological appearance and/or chemical composition, and (3) study of the blood including both the hemoglobin in the red cells as well as the plasma proteins.

Of the three methods mentioned above, studies of the blood have probably been the most extensive, particularly plasma protein determinations. The difficulty with such measurments is the frequency with which normal values are obtained in patients who are obviously protein-deficient. The reasons for this discrepancy are many, but have been discussed in detail elsewhere. Suffice it to say that such determinations are really not

necessary and that the average clinician can meet his responsibility in most cases in a satisfactory manner, without recourse to such measurements, by knowledge of the bedside features of protein deficiency, which will now be discussed.

Acute Protein Deficiency. This type of deficiency is easy to detect from the history alone. Any patient who has lost a significant amount of protein-containing fluid will suffer from acute protein deficiency, particularly acute hypoproteinemia. It will perhaps suffice to mention the clinical conditions under which such loss occurs, noting that in many cases hemoglobin as well as plasma protein is lost at the same time. These conditions include the following: severe hemorrhage, extensive burns, intestinal obstruction, peritonitis, empyema, pneumonia, severe tissue injury, extensive draining wounds or sinuses.

In all of these conditions, it is clear that protein-containing fluid leaves the blood stream either to the outside, into the tissues, or into the body cavities. The clinical manifestations produced by such acute loss will vary with its degree and rapidity. The production of surgical shock is the most severe result of such loss, but abdominal distension from edema of the intestinal tract as well as suppression of urine from a fall in the colloidal osmotic pressure of the blood will also be observed in many instances.

Chronic Protein Deficiencies.—Here the loss of protein occurs because of tissue breakdown with excretion of urea and ammonia in the urine, and therefore may be measured by calculating the total nitrogen output in relation to the intake. Some loss of nitrogen is normal, but in certain diseases, particularly in fever and extensive trauma, this destruction is tremendous and may lead to the loss of as much as 2 pounds of muscle protein tissue a day.

The history of the case will obviously enable the physician to know whether excessive loss of protein tissue has actually occurred. But more important, a history of the dietary intake will be decisive in evaluating the degree to which such a loss has been prevented. Obtaining a dietary history is not always easy, but a serious attempt should be made, and inquiry as to the amount of milk, meat and eggs will often indicate how much or how little proein the patient has actually taken.

Bedside manifestations of chronic protein deficiency are numerous and even in absence of a history should lead the physician to a correct estimate. Loss of body weight with due regard to the influence of edema, both hidden and overt, is of obvious importance. Faulty wound healing is a late manifestation, as is the appearance of decubitus ulcers.[3] An impaired resistance to infection and a reduction of hepatic function have also been shown to follow chronic protein deficiency. Nutritional edema is perhaps the most striking bedside evidence of hypoproteinemia; yet it varies tremendously in its appearance and disappearance, and can very seldom be correlated accurately with the level of serum protein. There are undoubtedly many factors beside protein deficiency which determine when and where nutritional edema will appear. Moreover, nutritional edema is not always visible; it occurs in the intestinal wall, thereby leading to various disturbances in gastrointestinal function, and may appear at areas of intestinal trauma as, for example, after anastomoses, and lead to symptoms of obstruction.

The early manifestations of protein deprivation are difficult to describe because they are so nonspecific. There is some evidence, however, to show that general malaise and loss of strength, particularly after operation, and usually attributed to the procedure in many instances, are due to protein deprivation inasmuch as they are often absent when protein starvation is avoided.

Therapy

It is an oversimplification to say that ordering an adequate high-protein diet will prevent or cure protein deficiencies. In the first place, special devices are frequently necessary in sick patients in order to assure an adequate intake. In the second place, the parenteral channel is sometimes needed for one or more reasons. In the following discussion treatment will be divided into the correction of acute in contrast to chronic deficiencies.

Acute Protein Deficiencies.—Therapy is usually rather simple and effective, because a transfusion of either whole blood or plasma replaces at once what is missing, and is permanently effective as long as no further losses occur. It is obviously important that these acute losses be replaced as soon as possible, and indeed in the case of bleeding at operation, the loss can be

corrected almost at once. On the other hand, when the loss occurs through damaged capillaries, there is some evidence to show that correction is best made several days later, when the damaged capillaries are no longer permeable, in order to insure against further loss of the injected material. Such delay, however, is obviously dangerous when the loss has been so great as to lead to surgical shock. In such cases, the replacement must not only be immediate, but it must be rapid in order to prevent the irreversible changes which occur when the circulation remains impaired for a long period of time.

Chronic Protein Deficiencies.—There are two general features which should be emphasized. First, an adequate intake must be started at the very beginning—in other words, the first day the patient comes under our care. If protein deprivation persists, the problem becomes magnified greatly. It is much harder to correct a chronic protein deficiency than it is to prevent it. Second, an adequate protein intake cannot be left to chance nor to the usual types of dietary procedures.

The oral route is obviously the best for the administration of protein. It is not only the cheapest, but it is probably the most effective physiologically. Protein may be administered orally either in the form of whole protein separated from natural food, or as a part of natural food substances. Protein may also be administered in the form of amino acid mixtures which in some instances have advantages over whole protein—for example, when it is advisable to spare the need for digestion, which may be impaired. When the physician wishes to administer larger amounts of protein than can be assimilated in the form of whole protein, amino acids may be used, or when he wishes to combat hyperacidity, amino acids are better buffers than whole protein. It should be emphasized, however, that hydrolyzed protein must have a high biological value, and that a large enough amount must be given each day. Thus far, the taste of hydrolyzed protein preparations has been a distinct disadvantage except in the case of tube feeding.

The problem of anorexia in sick patients requires devices which permit the ingestion of a large amount of protein in a relatively small volume, preferably as liquids rather than solids. It is probably permissible to sacrifice some of the caloric requirements in order to insure a large protein intake. As a working rule, 100 gm. each of protein and glucose may be set as the probable minimum intake. By adding skimmed milk powder and pure casein to whole milk properly flavored, one may devise a palatable liquid drink which in one glass will contain about 25 to 35 gm. of protein and about 300 to 400 calories. This may then be ordered three or four times a day, and the physician thereby is assured that protein starvation will certainly not occur.

Larger amounts may be given to extremely malnourished patients. As much as 200 to 300 gm. of protein and up to 5,000 calories have actually been given to hospital patients when adequate supervision and care were provided. Tube feeding may sometimes be necessary and, of course, presents no unusual problem except for the necessity of using liquid food.

Parenteral Protein Feeding.—The parenteral route for the injection of needed protein must only be used on the most definite indications. This is so because any parenteral, particularly intravenous injection, is potentially dangerous. While the incidence of untoward reactions may not be great, they do occur and will obviously be less when this method of therapy is used least. On the other hand, the injection of protein material intravenously will permit great improvement in surgical and other care, and even be directly responsible for the saving of human life, particularly in the case of transfusions.

Protein can be injected intravenously either in the form of plasma and whole blood or as solutions of amino acid mixtures which are at present available only as preparations of hydrolyzed protein. The two forms of parenteral protein administration usually have entirely different indications but are frequently necessary in the same patient, but usually at different times.

Whole protein, in the form of whole blood or plasma transfusions, generally is indicated for the correction of acute protein deficiencies, as discussed above. Sufficiently large amounts must be given, usually a liter or more, and adequate precautions taken. In the case of chronic protein deficiency, whole blood and plasma may also be indicated, but usually are an adjunct to the use of amino acid mixtures and not the sole method of introducing protein as food.

For parenteral protein feeding, plasma is much

more expensive than amino acid mixtures and has a further disadvantage of introducing protein in an unphysiological manner. It is probable that the protein thus introduced is broken down to amino acids before being utilized. By contrast, appropriate amino acid mixtures represent the physiological manner in which food protein is assimilated from the gastrointestinal tract. The use of amino acids makes it possible now to furnish an almost complete parenteral diet. Up until the introduction of hydrolyzed protein for parenteral use, such patients suffered protein starvation. Now, one may give one liter of intravenous fluid containing four of the five essential nutritional elements, i.e., water, glucose, amino acids and salt. This is possible because at least one preparation, i.e., Amigen solution, contains in one liter 50 grams of hydrolyzed protein, 50 grams of glucose and 2.5 grams of sodium chloride plus minimal amounts of other salts. As utilized by the author, 1 liter of this solution is given in the morning and one in the afternoon during periods when the patient is unable to eat. Adequate vitamins are given separately.

The indications for the use of the parenteral channel are many, including primarily those patients unable to take any nourishment by mouth, or patients in whom complete rest of the gastrointestinal tract is indicated. This includes patients with intestinal obstruction, vomiting from any cause, general peritonitis, postoperative anastomoses, certain cases of ulcerative colitis or regional ileitis, and advanced malnutrition. In addition, the parenteral route will also be utilized as a supplementary method of introducing protein nourishment in patients unable to take a large amount of protein by mouth.

The danger of reaction following intravenous injections has been studied rather widely. It is very real in the case of both whole blood and plasma transfusions, and is also present in such complex mixtures as hydrolyzed protein. In a series of 3,000 consecutive injections of Amigen solution by the author, twenty-two reactions, or an incidence of 0.8 per cent occurred, considerably less than was seen with plasma and whole blood transfusions during a similar interval. Contraindications to the injection of hydrolyzed protein are, first, any solution which is not absolutely crystal clear, and second, the development of any sign of sensitivity. Pyrogenic reactions, on the other hand, while they call for discontinuance of the injection, are not contraindications in a strict sense, since subsequent injections may be carried out without necessarily provoking a similar effect.

REPORT OF ATOMIC BOMB CASUALTY COMMISSION

A number of interesting facts relating to the Japanese who survived at Hiroshima and Nagasaki were disclosed in the report of the Atomic Bomb Casualty Commission released by the War Department at a recent press conference held in the office of the Surgeon General.

Following are some highlights of the commission's report, which was reviewed and cleared by the Atomic Energy Commission prior to issuance:

"Members of the commission have been impressed during their observations of atomic bomb survivors by the fact that many of the burns have healed with accumulations of large amounts of elevated scar tissue, the so-called keloids," said the report.

During the months of October and November, 1945, a study was conducted on 124 male inhabitants of Hiroshima. Examinations disclosed that, in 43 cases, the number of spermatocytes in the ejaculated sperm was less than 5,000 per cubic millimeter, or "absolutely sterile," in the words of Prof. Tsuzuki. Ten other cases were "relatively sterile" and the remaining 71 were normal.

"A reformation of the spermatocytes occurs in one month, so the recovery of damage to spermatocyte formation will be delayed more than that of the damage of white blood cells. The shorter the distance, the more severe was the damage. The damaging influence on the number of spermatocytes was observed in the area within a radius of three kilometers (about two miles) from the ground center. Within a radius of 2.5 kilometers there appeared some sterile cases. Within a radius of 1.5 kilometers one-half of the cases showed sterility."

Women who were in an early stage of pregnancy "have taken a normal course since the bombing," said Dr. Tsuzuki.

"It is already experimentally proved both in botany and zoology that there is a possibility of producing malformation of descendants when the sexual cells are affected in some degree by radioactive energy. The question, if this fact is applicable to the human beings or not, will be made clear by further observations.

"We have already clear evidence that the human sexual cells are also affected by the atomic bomb injuries. There is a possibility of malformation of the descendants, if the sexual cells should be affected selectively, without any severe damage to the other organs or tissues.

Heretofore, conflicting figures have been presented on the number and character of casualties at Hiroshima and Nagasaki. Dr. Tsuzuki quotes the Hiroshima prefecture as estimating, 19 days after the explosion, the dead at 46,185; the missing at 17,429; the severely injured at 19,691; slightly injured, 44,979, and other sufferers at 235,656. Six months after the catastrophe, the toll of dead and missing stood at 92,133, excluding the military dead. The total number of Hiroshima dead may be set at 100,000, according to the Japanese professor. The Nagasaki prefecture set that city's toll at 23,753 dead, 1,924 missing, 23,345 wounded and 89,025 other sufferers.—From *News Notes*, Office of the Surgeon General, April, 1947.

THE RELATIONSHIP OF INFECTIOUS AND SERUM JAUNDICE

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EPIDEMICS of jaundice are a regular war accompaniment, and the more widespread the conflict, the more civilians and military personnel fall victims. This fact has made it certain (without the added incubus of the recent war) that this form of infectious jaundice is a transmissible disease and, as such, must be distinguished from jaundice caused by drugs, toxins, degenerative and infectious processes of known bacterial origin, and neoplastic and calcific obstruction. The older term "catarrhal jaundice" is gradually yielding place to the term "infectious hepatitis." The older term greatly overstressed the factor of extrahepatic ductal swelling. Using the material from a local epidemic of infectious jaundice occurring in 1944, Fee and Tuohy[44] reported a high incidence of this type, and by profile studies of various laboratory procedures (with special emphasis upon information provided by quantitative urobilinogen estimations in the stool and urine) they established means of differentiating intra- and extra-hepatic jaundice.

The accepted entity of infectious jaundice provides a needful opportunity for clinicians to familiarize themselves with the habits and propensities of viruses in general: their immunological identification, selective localizations and the mechanisms of natural defense of the host. Since biological inhibiters and mold extracts are known to lack specificity in most bowel infections, the maintenance, for example, of the gamma globulin fraction of the circulating and tissue plasma, with a background of a good functioning liver, becomes paramount. Furthermore, behind this liver adequacy stands a sufficient diet with suitable protein content. Now that a general consensus obtains as to the transmissibility of the jaundice virus (of various types), many papers and reports are in the current literature dealing with the routes of entrance into the host, and how defense against the virus may be planned. Identification of the virus comes first to mind: whether one common virus accounts for this transmissible type of jaundice, or whether there are several distinct or possibly related forms. Since the morphological tagging of viruses is still far behind that of living bacteria, measures other than morphological identification are utilized.

Another form of intrahepatic jaundice, also closely identified with the events of the war and known as "homologous serum jaundice," is presently furnishing many fruitful studies. It first got prominent attention after some of the earlier military recruits were vaccinated for yellow fever. Later on as transfusions of banked blood and the giving of plasma became routine procedures on the battle field, this type of jaundice in some areas exceeded the totals of infectious jaundice where no transmission via the route of human blood could be incriminated. Lest it be assumed that this only concerns the armed forces in action or in the various hospital cantonments, the writers wish to report two cases of homologous serum jaundice, one terminating in death, with the same subacute liver atrophy so well described by the various authors reporting their military experience. In each instance these women developed their jaundice sixty to eighty days after abdominal operations, in the course of which blood transfusions were given as precautionary measures.

Doubtless, since the termination of war, there has been less and less epidemic jaundice. The usual caution of directors of blood banks will, of course, dictate the rejection of all donors with recent illnesses, not to mention previously jaundiced persons.

One of the authors (J. R.) has reviewed the extensive literature bearing upon the relationship between infectious hepatitis and serum jaundice. This digest is offered in an attempt to find out how much these entities have in common and wherein they differ. It is hoped that the reader will find stimulation and understanding in reviewing what our active medical men have been able to accomplish in this field of research despite the overwhelming difficulties and confusion of a military service spread around the world. World War II has provided much material for

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these various studies. Since routine epidemic and endemic infectious jaundice has long been studied, the liver damage associated with serum jaundice has been conspicuously stressed.

The following primary aims are set forth in attempting to group the recent studies: (1) to establish with certainty the entity of homologous serum hepatitis; (2) to catalogue the consensus of opinion as to its experimental reproduction; (3) to point out the likenesses and dissimilarities of homologous serum hepatitis and infectious hepatitis, and (4) to demonstrate in the last analysis that the "artificial" disease has a higher mortality rate, longer incubation period, and a reduced element of contagion.

Transmission of Infectious Hepatitis Via Natural and Experimental Routes

Since infectious hepatitis occurs in well-known epidemics, many studies attest the correctness of this clinical inference.[3,9,11] The agent is present in the blood stream before the onset and during the jaundice; it is also present in the feces and possibly in the nasal washings in the acute stages.[19] MacCullum and Bradley,[24] Havens et al[20] used such material establishing effective proof of transmissibility. The latter group fed nine volunteers samples of infectious sera or feces, producing the disease in five after an incubation period of from twenty to eighty-four days (average thirty-seven days). Neefe and co-workers[32] fed pooled specimens of feces from patients with infectious hepatitis to twelve volunteers, hepatitis occurring within twenty-six days in six of the twelve subjects. They were able to prove conclusively, using infectious materials from an epidemic at a boys' and girls' summer camp near Philadelphia, that the agent responsible for the epidemic was water-borne. This experiment appeared to them to be the first satisfactory evidence of the natural water-borne transmission of a virus disease to man.

The traditional use of laboratory animals as vectors or intermediary hosts has met with failure because animals are refractory. Cameron,[5] Paul et al,[37] Findlay and Martin,[13] Oliphant and co-workers,[36] Sawyer and his group,[40] and others made such attempts without infecting the animals used. The work of continental European investigators indicating positive results lacks confirmation in this country.[37] Recently MacCallum and Miles[25] rechecked the question of animal transmission. Inoculating Wistar rats, that had been placed on a diet deficient in protein, with blood and feces of infections hepatitis patients, followed by nine blind passages of tissues of these rats, these men were able to produce liver necrosis, and/or hemorrhage into the lymph nodes, gastric and intestinal walls and tissues of the lung. Thus these studies suggested to them that they were dealing with a transmissible disease caused by a virus, and hinted that hypoproteinemia in their animals made their livers susceptible. Bearing this new evidence in mind, one finds clinical support in the recent report of Snell, Wood, and Meienberg.[41] They studied thirty-two cases of serum jaundice occurring on an average of eighty-four days following military trauma. All had received blood or plasma after injury. The mortality rate was relatively high—19 per cent. The seriousness of the course of the disease in wounded men was attributed by them to a nutritional depletion which added to their vulnerability.

Serial passage of the disease in man has been reported on two occasions.[18,19] By using the human volunteer technique some of the properties of the agent have been determined.

1. Both the icterogenic agent in homologous serum jaundice[36] and that of infectious hepatitis[18,19] have been found to be heat resistant at 56° C. for one-half hour and also to pass bacteria-tight filters.
2. As in serum jaundice, the agent is present in the blood stream during the active phase.[5,19,24]
3. Its presence in the feces[14,19,24] and urine[14,46] has been similarly demonstrated.

Numerous substances have been used in the production of infectious hepatitis by the oral route. Voegt[46] claimed to have caused the disease successfully by oral administration of duodenal fluid, urine, and hemolyzed red blood cells. MacCallum and Bradley,[24] by feeding infectious feces to volunteers suffering from arthritis, claim to have produced the disease, although their results with nasopharyngeal washings were less convincing. Havens and co-workers[19,20] added weight to these observations by their studies of material secured from American and British troops in the Middle East and Mediterranean area. They gave fecal material in capsules, as well as urine and stool extracts, which had been filtered and dried. Two of three volunteers contracted jaundice after twenty to twenty-two days.

A number of reports emphasize the parenteral route as a means of producing the disease. Cameron,[5] using serum and whole blood secured from infectious cases, produced the typical picture in six of seven volunteers by intramuscular injection. Voegt[46] (9), in an earlier monograph, and others[19,24,36] using various parenteral routes reported similar results.

Homologous Serum Hepatitis

Homologous serum jaundice, a highly artificial entity, presents a more difficult problem in etiology. By definition, it is a form of hepatitis which usually occurs from six weeks to six months after the injection of certain samples of whole blood, serum, or plasma.[22] It implies that blood drawn from a nonjaundiced individual, or from one not known to be ill at the time, has gone into a blood bank pool. There is no doubt in the minds of many students of liver pathology that this entity has been commonly overlooked in the differential diagnosis of hepatitis; and with the greater use of blood and blood products (especially in view of the early release of excess armed forces plasma) this question becomes even more important. Peculiarly enough, serum jaundice has not been observed as yet after the injection of normal serum albumin and normal serum gamma globulin which were derived from 250 to 5,000 bleedings pooled for plasma fractionation.

The literature is replete with reports that the disease has been associated with the use of prophylactic measles serum.[26,28,29,33] MacNalty[26] observed jaundice among thirty-seven of eighty-two to 109 persons who had received this substance from the same material pool. Propert[38] reported not only that seven children developed jaundice after injection of convalescent measles serum but that there was definite evidence that two playmates developed jaundice approximately two months after contact with the injectees! Mumps serum has also been implicated.[2,27,28,31] One study[27] noted that hepatitis developed in 101 of 266 men inoculated with mumps convalescent plasma. Yellow fever vaccines in human serum drew especially widespread comment and attention due to the experiences of the United States Army[6,7,8] in 1942. Findlay, Martin, and Mitchell,[16] in an intensive study of 689 cases of yellow fever vaccine hepatitis, occurring in military personnel during World War II, stressed the importance of the clinical, pathological, etiological, and epidemiological features. Great emphasis was also placed on four cases suffering from post-inoculation hepatitis without jaundice, suggesting to them the greater need for consideration of hepatitis occurring in a forme frustre without recognizable jaundice. More emphasis, then, must be placed on serum hepatitis *sine ictero* in living subjects. Turner[45] and his colleagues carefully studied 4,083 cases of post-inoculation hepatitis at Camp Polk, Louisiana, the hepatotoxic agent being present in yellow fever vaccine, lot 369. The clinical picture with especial reference to the nervous system manifestations in severe cases was stressed. Other studies[12,15,17,36,42] have added further data to our increasing knowledge of post-inoculation hepatitis.

Reports dealing with the experimental injection of some of these sera are of interest. Oliphant[36] experimentally produced jaundice in volunteers by inoculation of two lots of yellow fever vaccine containing pooled serum, and also by inoculation of serum from eleven patients who had previously received yellow fever vaccines carried in human serum. Evidence was also presented that the icterogenic substance was absent from the blood stream two and one-half months after the disappearance of the jaundice. They made the novel observation that this agent might be neutralized with ultra-violet radiation.

Beeson[1] reported that seven persons who had received transfusions of blood or plasma at the time of an injury or surgical operation developed jaundice one to four months after the transfusion. Steiner's experiences add to these reports.[43] Rappaport[39] observed thirty-two cases of jaundice in military personnel following transfusion with plasma or blood. He opined that, apart from infectious hepatitis, transfusions may serve as the commonest current cause of jaundice in the armed forces. Jaundice due to plasma or serum has been further noted in scattered reports.[4,28,29,34] Neefe and others[34] related the 100 per cent occurrence of hepatitis in nine men inoculated experimentally with plasma or yellow fever vaccine containing human serum. Bradley, Loutit, and Maunsell[4] discovered that 57 per cent of their cases developed jaundice forty-nine to 107 days after infusion with pooled serum. Morgan and Williamson[29] commented on the fact that 18 per cent of their patients developed jaundice forty-nine to 107 days after transfusion of liquid pooled plasma or reconstituted dried serum.

The agent of serum hepatitis produces jaundice inconsistently when administered by the parenteral route. Oliphant and co-workers, using yellow fever vaccine and serum for vaccine-induced jaundiced persons, caused the disease to appear in thirty of 189 cases tried. MacCallum and Bauer observed two cases of jaundice when five volunteers were studied. Neefe[34] reported varying results with the inoculation of mumps convalescent serum, mumps passage material, and yellow fever vaccine. Paul[37] and others, reported a higher incidence of positive takes.

Serum jaundice has been transmitted in one case[23] by feeding serum and in three cases in which the icterogenic serum was swallowed accidentally by laboratory workers.[41] On the whole there is basic agreement by most observers that the oral administration of feces from homologous cases of serum hepatitis does not produce hepatitis. There is some evidence that nasopharyngeal washings carried the etiologic virus.[13] One is hard pressed to explain the observations of two authors[34,38] who felt that through contact with patients suffering from serum hepatitis, four persons developed a jaundice that did not appear to them to be the epidemic type. Were these true contact cases?

Differences of the Disease Entities

Thus, the problem of similarity or dissimilarity of the agents of serum and infectious hepatitis, despite all this research, still retains some secrets. The similarities have been commented upon; the differences remain of prime interest. Many investigators have emphasized that the death rate is higher in serum hepatitis than the 0.2 to 0.4 per cent characteristic of infectious hepatitis. Neefe et al[33] point out the fact that the temperature in infectious hepatitis usually is observed to be above 100°F. (orally), while that of serum jaundice usually does not exceed 100°F. Further they emphasize the fact that the incubation period in the artificial disease is prolonged sixty or more days. However, one must continually make allowance for the variable icterogenic "capacity" of the sera used which may well explain the variation in rates at which serum jaundice is produced as well as the difference in length of incubation period. Transmission differences require consideration. Multiple routes in experimental transmissions are common in infectious hepatitis, while efforts at feces transmission of serum hepatitis have generally met with failure[32]—hence the observation that it is not a relatively contagious disease.

The Problem of Homologous Cross Immunity

Since a number of investigators do not believe that the aforementioned criteria are sufficiently adequate for differentiation, antigenic studies involving immunity and cross immunity techniques have been utilized.

There is general consensus that a single attack of infectious hepatitis produces a degree of immunity.[5,16] Further, the infrequency with which this lesion occurs after thirty-five years of age suggests an age-acquired immunity, or an apparent subclinical childhood attack. Neefe and his group[33] have demonstrated experimentally that immunity to serum jaundice following infectious hepatitis does exist, while volunteers were found to be resistant to reinfection with the infectious hepatitis type up to at least eight months after recovery from hepatitis which had been induced by the same agent.

Homologous immunity in serum hepatitis has been discussed by Oliphant[35] who reinjected ten persons with yellow fever vaccine twelve to eighteen months after hepatitis had been induced by inoculating yellow fever vaccines or samples of similarly induced icterogenic serum. Ten normals were used as controls. Three of the latter developed hepatitis while none of the test group were so afflicted. Neefe[33] confirmed this view.

The data on cross immunity, however, leaves much to be desired. The assembled data presents conflicting conclusions. One investigational group[27] reported that of an army unit of 175 men developing serum hepatitis following prophylactic inoculation of a mumps convalescent serum, eleven of these cases had a history of "catarrhal" jaundice in childhood. Another group[16] was impressed by the apparent reduced susceptibility to serum hepatitis of persons who had previously had the infectious type. In striking contrast, Witts,[47] quoting Gordon, stated that previous homologous serum hepatitis might actually increase susceptibility to infectious hepatitis. Oliphant's[35] view that "recovery from homologous serum jaundice results in immunity to reinoculation with serum from acute cases of infectious hepatitis or with icterogenic yellow fever vaccine and that the immunity persists for at least twelve to eighteen months" has been challenged. Lack of data as to the age of the subjects seems to nullify

the above observation on the basis of decreased susceptibility to infectious hepatitis of persons over thirty-five years of age.

These recent investigations concerning cross immunity might be considered as pioneer work. Currently, Neefe and co-workers,[33] further exploring the problem, conclude that the hepatitis which occurred in the serum hepatitis resistant test group (five cases), following inoculation with infectious hepatitis test material, was not due to "reactivation of the serum hepatitis agent, to reinfection with that agent after disappearance of the previously demonstrated resistance or to breakdown of that resistance by an overwhelming dose of the same agent." Rather they felt that the hepatitis was due to the infectious material with which the cases were reinoculated. The absence of cross immunity suggested to them a difference either on the basis of an antigenic variation in strain of a single type of virus agent or on the basis of two different types of virus agents. These researches bring up the possibilities of various strains of virus as is well known with the higher bacteria.

Summary

1. Despite the difficulty objectifying virus types, these known forms of hepatitis are accepted as viral in origin and are just as definite etiologically as is measles or small pox.

2. Homologous serum hepatitis brings in a route of human transmission that involves the provinces of vaccine prophylaxis and human blood or serum replacement.

3. Paul and Havens[37] and Neefe and Stokes[32] have commented upon the relationship existing between the causal virus of serum jaundice and infectious jaundice and think they are distinct. It will be recalled that all viruses may have common propensities.

4. There is no need of denying anyone needed blood, plasma or serum; but the relatively small chance of transmitting serum jaundice should tighten up the indications for transfusions and the careful survey of donors for blood banks.

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A PLAN FOR THE DETECTION OF THE SOURCE OF RECTAL BLEEDING

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BLEEDING from the rectum, either as the patient's chief complaint or as one of several symptoms, is of common occurrence. It is frequently disregarded, judged as meriting little concern, but it should always be investigated since it may be the first evidence of malignant disease. The source is to be found and, if possible, eradicated. If this is impossible, one should at least be able finally to assure one's self and the patient of the absence of serious disease. One of the reasons for the frequent neglect or mistreatment of individuals with this complaint is the lack of a plan in the search for its cause.

In a recent and very complete article on the subject, an author states that "a complete proctologic study including proctosigmoidoscopic examination, examination of the stools, and an x-ray of the colon" should be done for all patients with rectal bleeding. Now the plain fact is that this is not necessary for all patients of this type, and, while every practitioner knows this, often he is not certain as to the one in whom it is necessary. The same writer lists some seventy conditions which produce blood in the stool, leaving the reader's mind filled with a bewildering confusion of causes but with few concrete suggestions as to how to proceed. If his rule is followed—and much the same advice is given in most articles on this subject—many patients will be subjected to arduous and unnecessary investigation and expense. On the other hand, if it is not followed, some very serious conditions may remain undiscovered. With the above in mind, I have attempted to arrange a graphic representation of the methods I have for years more or less automatically followed. Before proceeding further, I might say that this discussion does not apply to those persons with massive rectal hemorrhage and in whom the primary concern is the treatment of shock and blood loss.

In all cases involving rectal bleeding, a careful history is of value and is occasionally diagnostic of itself. Is the blood bright or dark, liquid or coagulated? Is it passed unaccompanied by, or mixed with, the stool? Is it merely on the toilet tissue? Estimates by the patient of the amount of blood passed are to be evaluated with caution, but often one may get some idea of the quantity. Do the bowels move daily and as usual for that particular patient, or has there been a definite change in bowel habits? If constipated, what measures have been undertaken to overcome it, and are they successful? If the bowels move frequently, is the movement an actual stool or does it simply represent an urge to move the bowels, producing blood, gas, and a semi-liquid material? Does the bleeding have associated with it itching, burning, or prolapse? If there is pain, what type is it and how long does it last? For example, a sharp cutting pain experienced at the moment of passing the stool and continuing for several hours afterward, gradually becoming less severe, together with streaking of blood, is almost pathognomonic of fissure. How long has the bleeding been going on and does it occur daily? A history of a change in bowel habits of from one or two movements a day to several bloody and watery discharges, to-

A PLAN FOR THE DETECTION OF THE SOURCE OF RECTAL BLEEDING

I. History
II. Inspection.
III. Digital examination.
IV. Anoscopic examination.
  A. Cause found and easily remedied.
  B. Cause found requiring lengthy or extensive treatment
  C. Cause not found.

} V. Proctoscopic examination.
  A. Cause easily remedied.
  B. Lengthy or extensive treatment.
  C. Cause unfound.

} VI. X-ray of colon.

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gether with weight loss, is of course suggestive of malignancy in a person of middle age. On the other hand, the same story in a young individual is more likely to be an ulcerative colitis. The patient with a story of something protruding after stool, which he is able to replace himself, in all likelihood has no more than prolapsing piles. The search for anything is made much easier by a knowledge of what to look for and where to look, and careful questioning will frequently bring out clues as to both.

Inspection

This should be done with the patient in the left lateral or Sim's position, with a good light, cotton swabs, applicators both loosely and tightly wrapped, probes, a waste basket for the convenient disposal of used material, and a stool for the examiner to sit on at a convenient level in relation to the patient. Most of the things needed for a competent rectal examination are part of every physician's equipment, but unless arranged for a rectal examination, oftener than not, they are not conveniently accessible. I may appear to be stressing a minor point, but I firmly believe that the difference between a very good rectal examination and a very bad one may depend on no more than this. There are a number of conditions causing bleeding which may be seen on inspection. Anal condylomata, an excoriated pruritic skin, minor injuries, or a true anal fissure or ulcer may be the source of blood seen on the toilet paper. A ruptured abscess or the external opening of a fistula, prolapse, prolapsing hemorrhoids, a prolapsing polyp, or an epithelioma of the anus may be easily seen. The common anal fissure in the anterior or posterior commissures may be diagnosed by inspection only, and if a bleeding fissure can be seen by simply everting the anal opening and looking, there is no point in making proctoscopic examinations or taking x-rays. In fact, there is little reason in looking for anything the hard way if it can be found by the easy way first.

Digital Examination

Regardless of the patient's story or the findings on inspection, all these people should have digital examinations. That this point needs to be impressed is remarkable, but experience proves that it does. Too many individuals are given advice and treatment without benefit of examination. The patient should be in the Sim's position with the examiner first seated on the stool, and then standing. The flexor surface of the finger should be directed forward, and then with the examiner standing, it should be directed toward the sacrum, at which time the finger can be made to pass into the rectosigmoid junction in most patients. It is quite impossible to do this with the finger directed forward as in an examination of the prostate. The size of the canal can be calculated and the amount of spasm estimated; if the pain is too great or the canal too small, the little finger may be used and, especially after some practice, much information may be obtained this way. Sphincter tone, abnormal relaxation, and the degree of anal fibrosis may be determined, as well as an estimate of the length of the anal canal. Masses encountered may be tumors, anal papillae, cysts, foreign bodies, including fecal impactions, and occasionally a submucous abscess may be felt. Uncomplicated internal piles cannot be felt. Following the digital examination, an anoscopic examination is to be done for all patients with blood in the stools.

Anoscopic Examination

This gives us first an appraisal of the color and texture of the anal mucosa and reveals at once the presence or absence of inflammation. A hemorrhagic proctitis or a low ulcerative colitis may be seen through an anoscope. The presence of hemorrhoids may be noted, and by rubbing them with an applicator, one finds out whether or not they bleed easily. If no blood has been seen but appears immediately on rubbing the pile, it is very likely that this same pile has bled on movement of the bowels. A pile may have bled rather freely an hour or two before examination and show no sign of bleeding at the time, but if it bleeds on rubbing, it is a likely offender. Is there a discharge and, if so, is it mixed with blood, is it purulent material, or is it mucus? The opening of a draining sinus may be seen, as may a torn crypt. We may see inflamed papillae cryptitis, internal prolapse, tumors, foreign bodies, and now and then parasites. A granulation-filled pocket in the posterior commissure sometimes is productive of blood while giving no other sign.

Having completed the anoscopic examination the question as to further investigation arises. It is either necessary or it isn't. About some patients one is certain, about others there may be some question. It is plain that, for example, a patient with a fissure that bleeds before one's eyes, and whose history suggests nothing else, does not re-

quire a proctoscopic examination and an x-ray of the colon. Neither does one with a fecal impaction or a granulating pocket in the posterior commissure. Cancer of the rectum itself has already been ruled out by the digital examination. Further examination may be deferred if the bleeding cause has been found and in addition if it can be corrected easily and quickly and with the loss of little time. Which patients then require a proctoscopic examination?

Proctoscopic Examination

Of all these people, those with obvious and easily corrected conditions may be eliminated at least for the time being, from our consideration. The second group consists of those in whom the source has been found but where the remedying of the condition requires lengthy treatment or extensive surgery. For example, though a patient has obviously bleeding piles, he should have a proctoscopic examination before operation, since even a hemorrhoidectomy is too extensive a procedure to undertake before eliminating the possibility of an accompanying carcinoma. On the other hand, if the bleeding can be stopped by means of three or four injections of quinine and urea hydrochloride into the hemorrhoidal area, little time will be lost, and if additional bleeding occurs from another source, further investigation may be carried out. Do not prolong treatment and do not subject the patient to an extensive operation without having done a proctoscopic examination. The third group in which a proctoscopic examination is to be done is, of course, that in which the source of bleeding has still not been discovered.

Proctoscopic examination should be done before, and not following an x-ray study of the colon. In a large proportion of patients with rectal or colonic disease, the diagnosis may be made by digital, anoscopic, and proctoscopic examination, without recourse to the barium enema and x-ray. On the other hand, not infrequently a patient is dismissed on the basis of negative x-ray findings alone, while having a tumor which, although justifiably missed by x-ray, can be seen by the proctoscope or felt by the finger. Proctoscopic examination should be done following preparation by means of a plain water enema and, if desired, may easily be done in one's office. Unless one confines his work to proctology, he is unlikely to have a proctoscopic table, but the procedure may be carried out satisfactorily on the ordinary examining table with the patient in the knee-shoulder position. Through the proctoscope the color and texture of the mucosa is noted, and the presence or absence of inflammatory change or of ulcers may be visualized. Anomalies in the size and direction of the lumen, varicositis, endometriosis and tumors may be seen. Blood may be seen and, if the examination is made carefully, it sometimes can be clearly seen to be coming from higher up in the sigmoid than the area being viewed. It is clear that there will be a number of patients in whom, up to this point, no bleeding source has been found, who will now, by means of the proctoscope, be eliminated as candidates for further investigation. Certain conditions will become apparent, suggesting definite lines of treatment of longer or shorter duration, or operative procedures of greater or lesser extent. Which patients should be subjected to examination by means of the x-ray?

Again we have each patient falling into one of three classes. The first class consists of those in whom the bleeding point has been found and is easily corrected. A patient with a hemorrhagic proctitis limited to the rectum, for example, need not have a colon film. If treatment can be easily and quickly carried out, x-ray may be deferred for the time being, and if no recurrence of the bleeding is noted, it need not be done at all. A polyp in the rectum is one of the few findings which merely show that my plan is not an inflexible one. Rectal polyps are accompanied by polyps beyond the proctosigmoidoscopic area in 50 per cent of cases; thus, even though a bleeding rectal polyp is found, x-ray of the colon should be done. The second class is made up of those patients in whom the source has been found but who require prolonged treatment or extensive surgery for its correction. The third class is made up of those in whom, as yet, the source of bleeding is still undiscovered.

The above represents an attempt to plan the investigation of patients complaining of rectal bleeding in such a way that, as we pass to the more complicated procedures, a patient is not dismissed at any point without due consideration for his safety. It is an attempt to go always as far in the investigation as we should for security's sake and, yet, not to undertake needless procedures.

THE CRUVEILHIER-BAUMGARTEN SYNDROME
Report of Case

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PORTAL hypertension, regardless of its cause, results in the development of collateral circulation if it exists long enough and is severe enough. The principal venous communications which may develop to relieve portal hypertension are as follows:[5] (1) The collateral pathways between the gastric veins and the esophageal veins may develop; when these develop excessively, the esophageal varices so frequently encountered in cases of portal hypertension appear. (2) The veins of the colon and duodenum may develop communications with the left renal vein. (3) The accessory portal system of Sappey may play a part in the collateral circulation. Branches pass in the round and falciform ligaments to join the epigastric and internal mammary veins and the azygos vein through the diaphragmatic veins. Occasionally a single large vein may pass from the hilus of the liver to the umbilicus by way of the round ligament. The development of this pathway produces the well-known caput medusae in the periumbilical region. Usually this large single vein is a markedly dilated parumbilical vein; more rarely it is a patent umbilical vein. (4) The intestinal veins may communicate with the inferior vena cava or its branches, by way of the veins of Retzius. (5) Communications between the inferior mesenteric veins and the hemorrhoidal veins may be used. (6) Rarely a collateral pathway between the portal vein and the inferior vena cava by way of a patent ductus venosus may be established.

Another collateral pathway may be established occasionally through the interposition of a small patent upper portion of the umbilical vein, the "Rest-Kanal" of Baumgarten, between the portal system and the epigastric veins as discussed by Armstrong and his associates.[1]

In 1835 Cruveilhier[4] commented on a case previously reported by Pégot[6] in which signs of portal hypertension and dilated abdominal veins with a caput medusae, as well as a parumbilical venous murmur were present. The significant findings at necropsy were (1) a small grossly normal liver, (2) a large indurated spleen and (3) a persistent and dilated umbilical vein. In 1907 Baumgarten[8] reported a case in which the clinical and pathologic findings were similar to those reported by Cruveilhier. In Baumgarten's case microscopic studies of the liver revealed only minimal periportal fibrosis and no true cirrhosis. Baumgarten suggested that patency of the umbilical vein and congenital hypoplasia of the liver and portal system might be the underlying etiologic factors of the clinicopathologic picture described.

To date more than sixty cases of Cruveilhier-Baumgarten disease, Cruveilhier-Baumgarten syndrome and Cruveilhier-Baumgarten cirrhosis have been reported.

In 1942 Armstrong and his co-workers[1] carefully reviewed and analyzed the fifty-three cases which had been reported up to that time and presented two cases of their own. They suggested that the term "Cruveilhier-Baumgarten disease" be reserved exclusively for those cases in which the original criteria of Cruveilhier and Baumgarten were satisfied. These consist of the clinical picture of portal hypertension with excessive umbilical circulation and the necropsy findings of a patent umbilical vein, atrophy of the liver with little or no fibrosis, and usually splenomegaly. These findings may possibly represent a distinct disease entity. They also proposed that the term "Cruveilhier-Baumgarten syndrome" be used to designate a larger group of cases in which the same clinical picture of portal hypertension with excessive umbilical circulation is present, but in which other underlying disease processes are responsible for the clinical picture.

Armstrong and his associates found that only six of the fifty-three cases previously reported and one of their own cases satisfied the original criteria of Cruveilhier and Baumgarten and could be called cases of Cruveilhier-Baumgarten disease. In the rest of the cases the clinical picture of portal hypertension with evidence of excessive umbilical circulation in the form of abdominal murmurs or thrills was present. In some of these cases, however, the portal hypertension was the result of such conditions as cirrhosis of the liver, vascular occlusion or anomaly, or the umbilical vein was not patent and the collateral circulation in the umbilical region was through other chan-

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nels. In others the patients were still living at the time their cases were reported, permission for necropsy had not been obtained or the descriptions of the findings at necropsy were inadequate for evaluation.

Since the review just mentioned, at least six more cases[2,3,7,9,10] of the clinical syndrome have been reported, only one of which can be considered as belonging to the group of cases of bona fide Cruveilhier-Baumgarten disease. Thus if this group of cases does represent a distinct etiologic and clinicopathologic disease entity, it is certainly one of rare occurrence since only eight cases have been reported to date to my knowledge.

Report of Case

A white man, a mechanic, twenty-three years old, was first seen at the Mayo Clinic on April 15, 1942. For two years prior to registration he had been employed in an aircraft factory where he had been exposed every few days to various industrial solvents, including carbon tetrachloride, benzene and acetone. In July, 1941, lassitude, mild anorexia and general loss of pep were noted. In February, 1942, he left his job to go to Arizona and to do outdoor work. The symptoms just mentioned cleared rapidly and he felt essentially well for about a month. In March, 1942, nausea, anorexia and diarrhea developed rapidly. Two days after onset he suffered from a fairly severe bout of cramplike abdominal pain, and he began to note abdominal enlargement. Exploratory laporatomy was performed elsewhere. Two gallons (8,000 c.c.) of ascitic fluid were removed and cirrhosis of the liver was found. The ascitic fluid continued to form, and edema of the ankles developed. Paracentesis was performed on two occasions, the last one on April 6, 1942. During the nine days prior to registration at the clinic, ascites was considerably less marked and seemed to be progressively diminishing.

The past history, family history and review of systems were noncontributory.

The patient was well developed and well nourished. He weighed 163 pounds (73.9 kg.). The blood pressure was normal. The liver was enlarged to 2 to 3 cm. below the right costal margin. The spleen was not palpable. There was probably a small amount of free fluid in the abdomen. Peripheral edema and icterus were not noted. Several spider angiomata were present on the hands and arms. The veins of the upper part of the abdomen were enlarged only a little, if at all. A slight thrill could be felt over the lower end of the sternum, and a rough blowing murmur could be heard in this region. This murmur was loudest on inspiration and it was almost abolished by expiration.

Results of urinalysis, determination of concentration of hemoglobin, erythrocyte count, differential blood count, blood smear, routine serologic tests for syphilis, and roentgenograms of the chest were all within normal limits or were negative. The value for serum bilirubin was 3.0 mg. per 100 c.c. and the van den Bergh reaction was indirect. The value for the cholesterol varied between 123 and 175 mg.; that for cholesterol esters was 77 mg., for lecithin 214 mg., for fatty acids 275 mg. and for total lipoids 394 mg. per 100 c.c. of plasma. The prothrombin time was 22 seconds as compared to an average normal of 18 seconds. The sulfobromophthalein test of liver function revealed a grade 2 retention of dye, on the grading basis of 1 to 4. The sedimentation rate of erythrocytes was 1 mm. at the end of one hour by the Westergren method. Urobilinogen was found to be present in the urine in dilutions up to 1:8. None was present in dilutions of 1:16.

The patient was instructed in the use of a high carbohydrate diet and vitamin supplements and was dismissed.

The patient returned to the clinic on July 9, 1942, for a checkup. He was feeling well, he could wear his old clothes, and he thought the fluid had left the abdomen. He had noted edema of the ankles on only one occasion while on a long bus trip. His only complaint was of a mild discomfort in the right upper quadrant of the abdomen immediately after eating. He weighed 179 pounds (81.2 kg.). Physical examination at this time revealed no free fluid in the abdomen. The liver was enlarged and could be felt 2 to 3 cm. below the right costal margin. The spleen was not palpable. There was no telangiectasia. The urine was normal. The value for bilirubin was 1.9 mg. per 100 c.c. of serum and the van den Bergh reaction was direct. The prothrombin time was 21 seconds as compared to an average normal of 19 seconds. A sulfobromophthalein test of liver function revealed a grade 2 retention of the dye. The patient was dismissed with instructions to continue his dietary regimen and the taking of vitamin supplements.

The patient was not seen again until June 6, 1945. He had felt well after his last visit to the clinic until May 13, 1945. He had worked full time and had had no evidence of ascites or edema. He had not been exposed to industrial solvents except for a short period in December, 1944, when he had overhauled an airplane and inhaled fumes from what he called "dope" and "thinner," containing ethyl and methyl alcohol, acetone and benzene. On May 13, 1945, he suddenly vomited some material that looked like coffee grounds and passed a tarry stool. He did not faint and transfusions were not necessary. He was hospitalized in his home community. One week later he noted a rapidly developing, large abdominal swelling. This proved to be due to ascites, and paracentesis was done three times before his return to the clinic. The intravenous use of mercurial diuretics was without benefit. He had no other symptoms except those associated with the volume of his ascites.

On admission the patient weighed 169 pounds (76.7 kg.). He was well developed and well nourished. Blood pressure was normal. Physical examination of the chest revealed slight elevation of the diaphragm on both sides. The abdomen was greatly distended, globular and tense. A fluid wave was elicited. The liver was enlarged to 4 cm. below the right costal margin. The spleen could not be palpated. There was slight edema of the legs,

scrotum and penis. Over the lower part of the thorax and upper and lateral parts of the abdomen the superficial veins were dilated (Fig. 1). A thrill was felt in a region measuring about 2 cm. in diameter over the lower end of the sternum and xiphoid process. A loud continuous venous murmur could be heard over this and a surrounding region measuring about 6 by 9 cm. This murmur had a rushing, almost whistling character that could be compared to the sound of wind. It was greatly increased by deep inhalation and was partially subdued by forced exhalation (Fig. 2).

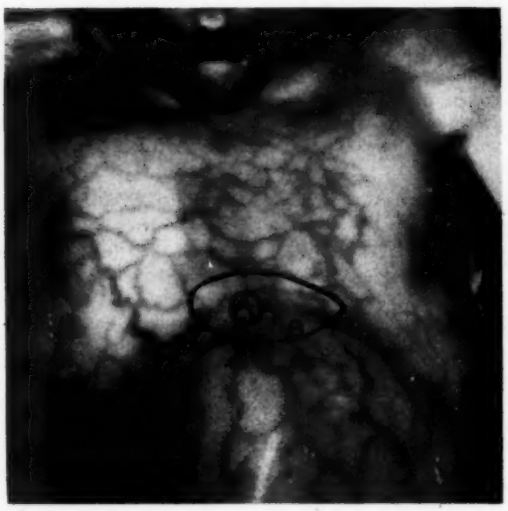

Fig. 1. Dilated venous channels. *A* is region where the thrill was palpable. Large ellipse, *B*, is region over which the murmur was heard (infra-red photograph).

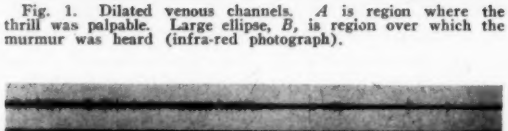

Fig. 2. Stethogram of the abdominal murmur. The top tracing is the sound recording. The middle tracing is the electrocardiogram and the lower one is the respiratory tracing.

The urine was normal. The concentration of hemoglobin was 14.9 gm. per 100 c.c. of blood. Erythrocytes numbered 3,810,000 and the leukocytes 4,700 per cubic millimeter of blood. Roentgenograms of the chest revealed no abnormalities. Roentgenoscopic examination of the esophagus revealed esophageal varices. Proctoscopic examination revealed no varices or hemorrhoids. The value for the blood urea was 36 mg. per 100 c.c. The value for the cholesterol was 123 mg., for the cholesterol esters 62 mg., for lecithin 189 mg. and for fatty acids 156 mg. per 100 c.c. of plasma. The concentration of protein was 5.4 gm. per 100 c.c. of serum and the albumin-globulin ratio was 1.27:1. A sulfobromophthalein test of liver function revealed retention of the dye, grade 3. The prothrombin time was 25 seconds as compared to an average normal of 18 seconds.

For twenty-one days the patient was on a conservative program of 4 mg. of synkamin (vitamin K) by mouth daily, rest and a high-carbohydrate, high-protein, low-fat diet with vitamin supplements. At the end of this period the prothrombin time was 23 seconds and the patient's condition had not changed essentially. Paracentesis was carried out three times in the course of the twenty-one days because of the rapid accumulation of ascitic fluid. The amount of fluid obtained varied between 4,500 and 7,600 c.c. The fluid was clear and straw colored with a specific gravity of 1.011 and it contained 250 cells per cubic millimeter. Abdominal exploration, which was carried out on June 28, 1945, revealed a large hobnail liver and a firm spleen enlarged to about six times the normal size. The spleen and peritoneum were not adherent. Microscopic examination of a specimen removed from the liver revealed portal cirrhosis (Fig. 3). A large, single, dilated vein was found in the falciform ligament. It could not be definitely established whether this was a patent umbilical vein or a parumbilical vein. Omentopexy was performed.

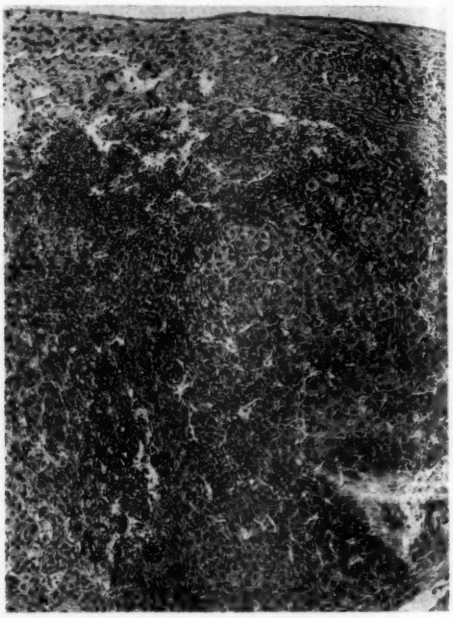

Fig. 3. Cirrhosis of liver (x80).

Comment

Many cases will appear which can be placed accurately in the group with Cruveilhier-Baumgarten syndrome by virtue of definite evidence of disease processes, such as hepatic cirrhois.

(Continued on Page 534)

SULFADIAZINE GRANULOCYTOPENIA AND THROMBOCYTOPENIA COMPLICATING PREGNANCY WITH SURVIVAL

Report of a Case

ROBERT SUKMAN, M.D., and NELS M. STRANDJORD, M.D.
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THE ROLE of sulfonamides in the production and treatment of agranulocytosis needs further clarification. The neutropenia due to sulfonamides has been classified as an acquired type of allergic as well as specific phenomenon. It is apparent that severe and frequently fatal agranulocytosis may result from the prolonged or intermittent use of sulfonamides. Park[8] is of the opinion that the agranulocytosis due to a sulfonamide drug occurs after an initial sensitizing dose to which there is no reaction. An incubation period of from six to twenty days follows, after which continued use of the drug will result in an allergic reaction characterized by suppression of bone marrow. It is pointed out that large doses over short periods of time (not over one week) will not result in a drug allergy, as will a smaller dosage over a prolonged period of time. When sulfonamides are given for a period of over one week, the patient should be closely checked with daily blood counts, and the drug discontinued if a neutropenia develops. The sensitivity to the drug may be of short duration, and in some cases after recovery from a sulfonamide agranulocytosis the drug may again be used without the production of neutropenia.[1] However, should the sulfonamide be used again, it should be given in ascending doses and with careful hematological control. Patients sensitive to one of the sulfonamides are not necessarily sensitive to another sulfonamide.

The patient with agranulocytosis does not die because of lack of granulocytes *per se*, but due to sepsis developed secondarily in the absence of granulocytes. Cases in the literature[7] have been reported in which sulfonamides have been continued in the face of severe agranulocytosis. If the sepsis was controlled, the bone marrow recovered its ability to produce granulocytes, with a favorable outcome. However, if possible, the toxic agent should be discontinued and another antibiotic substituted to control or prevent sepsis.

At present the drug of choice in the treatment of sulfonamide agranulocytosis is penicillin. Dameshek,[4] and Russek, et al.[9] have reported successful results. This antibiotic substance not only has a bacteriostatic action but also does not depress the bone marrow. In addition to the control of the sepsis it is advisable to use other supportive measures. Whole blood transfusions, if used within twenty-four hours after being drawn, still contain the desired platelets and white blood cells and should be used if available. Folic acid,[3] a liver concentrate in purified crystalline form, has been shown to increase the total leukocytes and also the percentage of granulocytes. If the infection present is caused by an organism not sensitive to penicillin, other antibiotics such as streptomycin may be used. Cameron[2] reports a fatal case in which penicillin controlled the staphylococcus infection but not the pyocyaneous septicemia.

There have been many cases of sulfonamide agranulocytosis, few of which have been reported. Of those reported, the majority of patients with mild attacks have survived; however, in most of the "full blown" cases death has resulted.

Purpura hemorrhagica is a possible serious, though infrequent, complication of sulfonamide drug therapy. Gorham et al.[5] in reviewing eight cases found a mortality of 50 per cent. In three of the four fatal cases the drug was continued after the purpura had occurred. In the four cases in which recovery resulted, the drug was discontinued at the first sign of hemorrhagic manifestations. The total amount of drug administered varied from 5.5 gm. to 48 gm. This indicates a difference in individual susceptibility. Kracke[6] has shown by daily blood counts on patients receiving sulfonamide therapy that there is a depression of the platelets on the first day of treatment and a decided increase in platelets on the first day after treatment is discontinued. Thrombocytopenia precedes the purpura. Therefore, if a marked reduction in the platelets is found, the drug should be discontinued immediately. In practice, platelet counts being rather impractical, one can obtain an accurate estimation of the platelets by examining the differential

From the Ancker Hospital, Saint Paul, Minnesota.

TABLE I. BLOOD EXAMINATION RECORD

Date	Hemoglobin in Grams	Red Blood Cells in Millions	White Blood Cells	Differential					Sed. Rate	Platelets	Transfusion
				P	L	M	E	B			
8- 2-46	7.0	1.8 M.	2,700	49	51				91 mm./hr.		500 c.c. W. B.
8- 3-46	12.4	3.14 M.	850	35	63	1	1			10,000	3,000 c.c. W. B.
8- 4-46	11.8	2.95 M.	2,050								1,000 c.c. W. B.
											500 c.c. Plasma
8- 5-46	8.5	2.62 M.	850	69	29	2				12,000	1,500 c.c. W. B.
8- 6-46	10.2	4.38 M.	2,150	51	31	13	5				1,000 c.c. W. B.
8- 7-46	12.2	3.9 M.	3,250	77	23						
8- 8-46	12.2	3.7 M.	6,450	86	10	4				14,000	
8- 9-46	12.0	3.71 M.	11,950	72	25	2	1			28,000	
8-10-46	12.4	4.26 M.	9,300	81	14	5				36,000	
8-12-46	12.2	4.98 M.	7,500	78	18	4			32 mm./hr.	121,000	
8-13-46	11.2	3.83 M.	9,300	65	26	9					
8-14-46	11.0	3.64 M.	6,400	51	43	6				140,000	
8-15-46	12.6	3.93 M.	7,000	56	35	9				184,000	
8-16-46	11.8	3.76 M.	6,200	67	25	8				148,000	
8-17-46	12.8	4.28 M.	6,500	63	33	4				162,000	
8-21-46	11.4		6,100	49	49	2					
8-28-46	10.2		5,450	36	48	13	3			134,000	
8-30-46	13.2	4.0 M.	8,350	50	45	5				100,000	
9- 6-46			9,300	29	67	4				140,000	
9-20-46	13.0		6,100	30	65	5					
9-28-46	13.0	4.85 M.	6,550	[illegible]					25 mm./hr.		
11-25-46	12.7		5,650	50	43	4	1	2			

smear. With a marked thrombocytopenia the platelets will usually disappear from the smear.

Case History

On August 1, 1946, Mrs. A. K., a forty-three-year-old white woman, entered Ancker Hospital with the chief complaints of hemoptysis, occurring five days previously, and weakness of five months' duration. She was eight months pregnant, the last menstrual period having been on December 3, 1945. She was a para seven, gravida seven. The history indicated that in June, 1946, the patient had developed frequency and burning on urination and she had been given 1 gm. of sulfadiazine three times a day for a period of two days. For the past five months the patient had complained of severe weakness, swelling of the ankles, and fainting spells. For the past month there had been a daily elevation of temperature to 100° orally. To treat an anemia, her private physician had given her iron, calcium and vitamins. One week previous to admission the patient had again been given 1 gm. of sulfadiazine three times a day for a period of six days. Because of the hemoptysis the patient was referred to Ancker Hospital to rule out tuberculosis.

Physical examination on admission revealed a well-developed and apparently well-nourished white woman. The skin and mucous membrane showed marked pallor. The pulse was 128 per minute and the blood pressure was 110 systolic and 82 diastolic. The uterus was enlarged corresponding to an eight months' pregnancy.

Laboratory examination disclosed a hemoglobin of 7 gm., a red blood count of 1,800,000, a white blood count of 2,700, a differential of 51 per cent lymphocytes and 49 per cent polymorphonuclear cells. Few platelets were found on the smears. The x-ray revealed an essentially normal chest.

On the second hospital day, the patient developed a severe diarrhea, having large malodorous, watery, grossly bloody stools. There was marked retching and vomiting. She developed large areas of ecchymosis over the entire body. Her temperature became elevated to 103° and the blood pressure fell to 98 systolic, 60 diastolic. She was given whole blood transfusions and penicillin, 50,000 units every three hours intramuscularly. On the third hospital day, the patient, having become dyspneic and cyanotic, was placed in an oxygen tent. At this time her white count had fallen to 850, and her platelet count was 10,000 (Table I). Many new areas of ecchymosis were found in the mucous membranes as well as in the skin.

Because of the viable fetus and the critical condition of the patient, permission was granted and preparations made for postmortem section if the patient should expire undelivered. On August 4, 1946, at 12:45 A.M., after a total labor of two hours and five minutes, the patient was delivered of a 6-pound 6-ounce living baby girl. The delivery was carried out with the patient in bed, under an oxygen tent and with aseptic technique. A first degree mucosal laceration was sustained, but because of the severe bleeding, sutures were required. Twenty hours post partum, the patient developed severe intra-uterine bleeding, resulting in shock. Intra-uterine packing and oxytocic drugs were used to control the hemorrhage. The pack was removed forty hours later.

On August 6 the patient developed acute urinary retention requiring repeated catheterizations over a period of six days.

On August 8 the patient had an elevation of temperature to 105° orally and developed pneumonia. The x-ray disclosed a patchy infiltration of the mid-portion of the base of the left lung. The purpuric lesions in the skin increased in number and the patient developed jaundice. Penicillin was increased from 50,000 to 100,000 units every three hours. Sixteen days later, x-ray of the chest showed complete resolution of the infiltration.

On August 11 the patient was removed from the oxygen tent. At this time she developed a fecal impaction, following the removal of which she developed an elevation of temperature to 104°.

On August 18 the patient was much improved clinically, so penicillin was discontinued. However, on Au-

gust 23 the patient developed severe chills and had an elevation of temperature to 103.8°. She had swelling and tenderness in the left breast. A diagnosis of acute mastitis was made, and the patient was started on penicillin, 40,000 units every three hours.

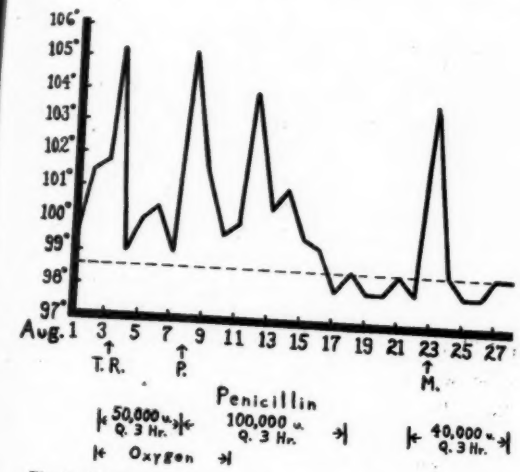

Fig. 1. Temperature chart. T.R. indicates transfusion reaction, P indicates pneumonia, and M, mastitis.

On August 28 the patient was considered fully recovered and was discharged to be followed in the outpatient clinics of Ancker Hospital. Follow-up blood examinations were satisfactory (Table I).

During the twenty-eight days of hospitalization, the patient was given 11,900,000 units of penicillin, fourteen transfusions of whole blood (500 c.c. each), and one transfusion of plasma (500 c.c.), seventeen 5 mg. tablets of folic acid (total amount available), and was in an oxygen tent for eight days (Fig. 1). To obtain the greatest benefit from leukocytes and platelets in the transfused blood, only fresh blood was used, several units being less than two hours old when given. The patient was given parenteral feedings, thiamine chloride 100 mg. daily, ascorbic acid 200 mg. daily, hykinone 1 c.c. (4.8 mg.) daily, and other supportive measures.

Summary and Conclusions

A case of granulocytopenia and thrombocytopenia following sulfadiazine therapy has been reported. To our knowledge this is the fourth case reported of thrombocytopenia due to sulfadiazine. The sensitizing dose was 6 gm. The clinical course was characterized by purpura, hemoptysis, melena, and depression of all the formed blood elements. Following parturition, the patient developed severe uterine hemorrhage, pneumonia and mastitis. The patient survived with massive doses of penicillin, multiple transfusions, oxygen, folic acid and other supportive measures.

Because of the seriousness of the complications, although infrequent, sulfonamide therapy should have careful hematological control.

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NAVAL RESERVE

During the months of May and June, a nationwide effort is being made to interest former navy men in joining the naval reserve.

The arguments for the desirability of a large naval reserve, for its effect in preventing future attack by a foreign war-monger and to provide a substantial base upon which to build in case of war, are incontestable.

The educational opportunities which can be utilized by members of the naval reserve cover a wide field. This enables those in a great variety of vocations to better themselves. Periodic two-week training cruises in ships of the reserve fleet afford a desirable way to obtain concentrated instruction. Members of the naval air reserve can retain and improve their flying or mechanical skills at one of the two dozen naval air stations now designated as reserve training centers. These centers, also provide training in radar, sonar, radio, and electronics.

Time spent in the reserve results in a 5 per cent increase in base pay for every three years of membership. Veterans of the army or navy between the ages of seventeen and thirty-nine, as well as non-veterans, are eligible.

VETERINARY MEDICINE

LOUIS A. BUIE, M.D.
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DISEASE is one of the great tragedies of living things. It is one expression of a struggle which is carried on among different forms of life. Incessantly the conflict goes on without quarter or armistice. Infectious disease is merely a disagreeable instance of a widely prevalent tendency of all living creatures to avoid the necessity of building by their own efforts the materials which they require to survive. Whenever they find it possible to take advantage of the constructive labors of others, they follow that course. Plants, partly nourished by decaying animal remains, synthesize new structures by means of their roots and green leaves. Animals eat the plants, man eats both and bacteria attack all. Without bacteria to maintain the cycles of carbon and nitrogen exchange between plants and animals, all life probably would cease eventually. Plants would have no nitrates and no carbon dioxide with which to maintain their perennial synthesis. Cows and pigs would have no clover, man would have no meat and potatoes, rice and tea, beans and fish or whatever his diet, as governed by geography, may be.

Life is, in a sense, an endless chain of parasitism. That form of parasitism which we call "infection" is as old as animal and vegetable life. Swords and lances, high explosives, and all the modern engines of war have had less effect on the fates of nations than plague, typhus fever, cholera, yellow fever, malaria, typhoid fever, tuberculosis, smallpox, diphtheria and pneumonia. Nations have crumbled under their onslaught.

The partial emergence of mankind from the direful effects of these conditions has been due to the advancement of science. The tremendous technical advances made in the science of medicine have modified greatly the nature of its practice, as well as all of its social and economic relationships. The practice of medicine, once limited almost entirely to the physician, now enjoys the participation of many other professions which are concerned with vital aspects of the medical problem. In many ways the veterinarian must be a scientist far beyond the heights that must be reached by the physician.

Many of the bacterial diseases of animals may cause serious illness in human beings, and animals are susceptible to almost as many diseases as are human beings. Economic problems are not the only factors which demand that diseases of animals be controlled and eradicated whenever possible. There is no doubt that the economic loss to the livestock industry caused by preventable disease has been significant, but this problem cannot be considered to be as vital to man as the effect of those diseases which are communicable to him. Basically, the professional activities of veterinarians and physicians are the same. Both are concerned with the diagnosis and treatment of disease and its control and prevention. Probably the most important functions of your profession are the care of sick and injured animals, the protection of that livestock industry on which the life of our nation greatly depends and the protection of human beings against those diseases which are peculiar to animals but which are communicable to man. Probably in the last instance we shall find the greatest opportunity for co-operation between the veterinary and the medical professions. It would be superfluous for me to discuss before this organization those conditions which are common to animals and which are communicable to man. In fact, it would transcend my capabilities. But I venture to say that many would manifest no little surprise should a complete list of these diseases be recited. One can scarcely believe that glanders, encephalitis, Malta fever, anthrax, tuberculosis, milk sickness, some parasitic diseases, swine erysipelas, psittacosis, cowpox, foot and mouth disease, plague, tularemia, rat-bite fever, infectious jaundice, Rocky Mountain spotted fever and rabies—yes, all of these and probably many other diseases—fall into this category. In humans some diseases, such as rabies, occur very rarely in this age, because of scientific discovery and attainment. But when it strikes, what is more ghastly than rabies? A cursory review of a list such as has been given will dispel at once any thought that the activities of the veterinary physician are chiefly concerned with economic

Response of the president of the Minnesota State Medical Association at the fiftieth anniversary banquet of the Minnesota Veterinary Medical Association, Saint Paul, Minnesota, January 7, 1947.

problems. His signal achievement in eradicating tuberculosis of cattle; his accomplishments in dealing with infectious equine encephalomyelitis; the service which he has rendered in practically eliminating glanders as a threat to the health of human beings; the fact that he has prevented undulant fever from becoming a major health problem by his supervision of the milk and meat supply; the fact that his co-operation with the medical profession and the splendid achievement of his specialists in the fields of pathology and bacteriology have made it possible to control many diseases of a parasitic nature; all of these accomplishments and many more reveal the heights which the practice of your profession has attained.

We are living in an age of research. There is no doubt that the progress of our entire civilization is based on the power of the human intellect. When the spark of genius appears in an individual, it should be given the greatest opportunity for development, so that its benefits may be extended. A new opinion may originate with a single individual, but the result which such an opinion may produce will depend on the opportunity which it is given for development and its effect on the minds of those who are ready for its reception.

In veterinary medicine, materials have been collected which present a rich and an imposing appearance, but unless and until these materials can be brought to those who are interested in becoming members of your profession, your greatest ambitions cannot be attained. No doubt many men and women of your profession who are desirous of establishing themselves satisfactorily in their work have been diverted from their purpose by lack of opportunity for educational advancement. It is certain that many have failed to adopt this profession as their life work because of lack of educational facilities. Many have had to be contented with inferior training. Many of these last, nevertheless, have succeeded by dint of ceaseless labor in establishing themselves on a plane above reproach. Never in the history of your organization has there been a greater need or justification for educational expansion.

I know that your present requirements for a degree in veterinary medicine are two years of preveterinary training in a recognized university or college and four years in a veterinary college. I know that since the war there has been a striking increase in the number of both men and women who wish to study veterinary medicine. I know that at Kansas State College one out of every seven individuals who registered wished to study veterinary medicine, but because of lack of facilities in the various colleges, the number of students enrolled in veterinary medicine still shows little increase over that recorded before the war. I know that in 1945 there were ten veterinary colleges in the United States and two in Canada. Also, I know that since then, Illinois Missouri and California have established schools of veterinary medicine, but all this is insufficient. It appears that we may view with optimism the prospect of such an expansion in our own great state university. A similar development is clearly the responsibility of many institutions whose function is the advancement of the teaching of medical science. It ill behooves them to linger in the cloudy obscurity of ancient ideas and practices. Science and industry recognize the important role of highly trained, ethical and independent members of the veterinary profession, and your colleagues in the medical profession are proud of your achievements.

INFECTIOUS AND SERUM JAUNDICE

(Continued from Page 502)

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CLINICAL-PATHOLOGICAL CONFERENCE

COR PULMONALE

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DR. A. M. MCCARTHY: This case (A-46-2348) is that of a twenty-nine-year-old male who had been admitted to the Minneapolis General Hospital on several occasions.

In 1927, at the age of nine years, he had an attack of diphtheria while in Wisconsin, and little is known about the details of the illness. During the attack of diphtheria, he developed gangrene of his right leg. The leg was amputated. A persistent cough followed the illness. In 1928, he was seen elsewhere because of his chronic cough. X-rays at this time showed a parenchymal infiltration and fibrosis in the right upper lung that was thought to be tuberculosis. In 1929 he was treated for tuberculosis elsewhere. Acid-fast bacilli were never demonstrated. Artificial pneumothorax of the right side was maintained for several months and repeated at various times up to 1938.

He was first admitted to the Minneapolis General Hospital in 1938 complaining of a chronic cough. His sputum was negative for acid-fast organisms. Blood pressure was 100/60. Hemoglobin was 85 per cent (Sahli); leukocyte count was 16,500. Serology was negative. Urinalysis showed albumin that varied from a trace to four plus. The clinical impression was pneumonia of the left lower lobe. He responded well to sulfanilamide.

He was next admitted in July, 1940. At this time, he was suffering from a low grade fever and raising approximately 2 ounces daily of thick green purulent sputum. All sputum examinations were negative for acid-fast bacilli. Lipiodal studies showed a saccular type of bronchiectasis of the left lower lobe. Urinalysis showed a trace to four plus albumin with occasional casts and red blood cells. During this admission, he developed a spiking fever of 104° with chills. A friction rub was heard in the left chest. Type 9 pneumococci were found in his sputum. He responded well to sulfanilamide.

He was readmitted in March, 1942, because of chills and fever, weight loss and increased productivity of his cough. Clubbing of the finger tips of both hands was noted. There was dullness over the entire right chest. The left chest was hyperresonant. Crackling crepitant râles could be heard in both lung fields. Heart tones were the loudest to the right of the sternum. His temperature varied from 98° to 102°. Sputums and gastric lavages for tuberculosis on guinea pig inoculations were negative. X-rays showed cystic bronchiectasis with atelectasis of the right lung, and emphysema of the left lung with cystic bronchiectasis of the base of the left lung. The heart and mediastinal structures showed a shifting to the right side of the thorax.

He was readmitted from time to time to the hospital during the next few years complaining of a cough, chills, and fever. Each time he responded well to chemotherapy and expectorants. Each time his urine showed from one to four plus albumin with numerous red blood cells and a few leukocytes per high power field. In June, 1942, his blood pressure was 112/68. A phenolsulphonthalein test showed a total urinary excretion of 49 per cent dye in two hours. A congo red test for amyloidosis showed 62 per cent retention of dye in the blood in one hour. Concentration tests showed a specific gravity of urine that varied from 1.006 to 1.020. Electrocardiograms showed a sinus tachycardia.

His next admission was almost three years later in March, 1945. His temperature varied between 100° and 103°. He expectorated two to three cups of sputum daily. Venous pressure varied from 17 cm. citrate to 21 cm. citrate. Liver dullness was noticed 3 cm. below the right costal margin. A congo red test showed 60 per cent dye retention in one hour. During this hospital stay, he developed dyspnea, ascites, and edema of his ankle. He was digitalized. Plasma proteins were 4.58 gm. of albumin and 1.93 gm. of globulin. Sedimentation rate was 67 mm. in one hour. Sputums were negative for acid-fast bacilli. An electrocardiogram showed right axis deviation.

He was again seen in June, 1945, because of recurrence and increase in dyspnea, ascites and edema of his ankle. Blood pressure was 94/60. He was markedly orthopneic and quite cyanotic. The right border of the heart was 10 cm. to the right of the midline. A loud blowing systolic murmur was heard best on the right side of the chest over the second and third interspaces in the right midclavicular line. His abdomen was distended with fluid present. The liver edge was not palpable. There was a two plus edema of his remaining leg. Venous pressure was 17.5 cm. citrate. Congo red test showed 68 per cent dye retention in one hour. Hemoglobin was 109 per cent (Sahli). He was still expectorating large quantities of sputum. He improved with diuretics, digitalis, and penicillin therapy.

He was readmitted in June, 1946, because of increasing dyspnea, orthopnea, and edema. The liver edge was down to the umbilicus. The neck veins were pulsating. There was questionable liver pulsation.

From the Department of Pathology, Minneapolis General Hospital, A. J. Hertzog, M.D., Pathologist.

Peripheral edema was four plus. Clubbing of the fingers was noted. Venous pressure was 23 cm. of citrate. Circulation time was 18 seconds with calcium gluconate. Blood urea nitrogen was 34 to 44 mg. per cent. Abdominal parententesis removed 1,000 c.c. of fluid. His last admission was in November, 1946. Blood pressure was 140/90. Pulse was 120. He was markedly cyanotic and orthopneic. The findings were similar to the last admission. Two thousand cubic centimeters of fluid were removed from his abdomen. He became cyanotic and expired on November 25, 1946.

DR. HERMAN KOSNITSCKY: This man was living on one lung, as his right lung had been completely collapsed by the inflammatory process and repeated pneumothorax for many years. The left lung was emphysematous. Both lungs with lipiodol studies on x-ray showed a sacular type of bronchiectasis. The question of amyloid disease arose but the laboratory findings by the congo red test were not confirmatory. Towards the latter part of his illness, he began to show signs of congestive right heart failure. This man lived unusually long with right heart failure. Once right heart failure occurs in chronic pulmonary conditions, patients usually die shortly. The earlier diagnosis of tuberculosis of his right lung was never established by finding acid-fast organisms.

INTERN: What is the mechanism of right heart failure in this case?

DR. HERTZOG: Pulmonary emphysema is present in practically all of these chronic chest conditions and, by interfering with the capillary circulation of the lungs, becomes the most important factor in the pathogenesis of cor pulmonale. In emphysema increased intra-alveolar pressure can be demonstrated. This increased pressure occurs at the expense of the collapsible capillaries and small blood vessels within the interalveolar septa. The peribronchial fibrosis associated with the bronchiectasis and the atelectatic right lung could be contributing factors.

STUDENT: What was the clinical diagnosis in this case?

DR. MCCARTHY: Chronic bronchiectasis with pulmonary emphysema; chronic cor pulmonale with congestive right heart failure; and amyloid disease of the kidneys.

DR. HERTZOG: If there is no further discussion, Dr. McCarthy will give the autopsy findings.

Autopsy

DR. MCCARTHY: The body was that of a young white male measuring 166 cm. and estimated to weigh 120 pounds. There was marked cyanosis particularly of the face, fingers, and toes. There was an old amputation of the right leg in the midportion of the thigh. There was grade 4 edema of the entire left lower extremity. The toes and fingers showed marked clubbing. There was present approximately 2,000 c.c. of straw colored fluid within the peritoneal cavity. The liver margin was down 10 cm. below the right costal margin. Both pleural cavities were obliterated by old fibrous adhesions. The right lung was completely collapsed.

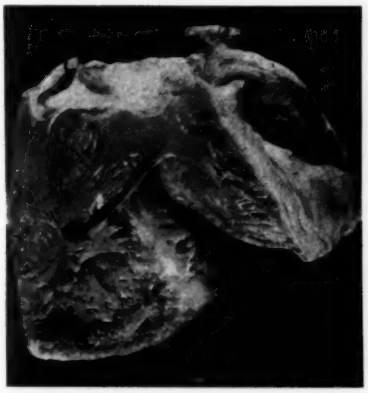

Fig. 1. Heart shows marked hypertrophy and dilatation of right ventricle.

The left lung was large and voluminous. The pericardial sac contained 800 c.c. of fluid. The heart weighed 490 gm. with practically the entire heart composed of a markedly dilated and hypertrophied right ventricle with a marked dilation of the pulmonary conus.

The righ ventricular wall measured 0.7 cm. as compared to the left ventricular wall that measured 1.2 cm. The tricuspid valve showed a marked dilation and measured 14.5 cm. as compared to the mitral valve with a circumference of 10.5 cm. The pulmonary ring measured 8 cm. as compared to the circumference of the aortic valve which measured 7 cm. There was no evidence of any hypertrophy of the left ventricle. The coronary arteries showed a minimum of sclerosis and were patent (Fig. 1).

The right lung weighed 500 gm. and the left lung weighed 1,220 gm. The right lung was completely collapsed and covered with old dense fibrous adhesions. On section of this lung there was complete atelectasis present. Evidence of tuberculosis was not found. The right main pulmonary artery in its lower branch near the bifurcation was partially occluded by an old pale thrombus that was firmly adherent to the wall of the vessel. The larger branches of the pulmonary artery were dilated and contained numerous atheromatous plaques in their walls. The bronchi on the right side were greatly dilated and filled with thick purulent material. This dilation extended out to the periphery of the lung. The left lung was large and voluminous and covered by old adhesions. There were numerous large emphysematous blebs in the upper lobe. On section of the lung there was rather marked hemorrhagic edema present especially in the upper lobe. The main branches of the pulmonary artery were dilated and showed rather marked arteriosclerosis in the form of yellow atheromatous plaques in their walls. The main bronchi of this lung were dilated and filled with

purulent mucoid material. This dilation of the bronchi extended out into the smaller bronchi to the periphery of the lung.

The spleen, liver, and kidneys showed gross evidence of passive congestion. The remaining organs showed nothing of note.

DR. HERTZOG: Microscopic examination showed no evidence of amyloid disease of the kidneys, liver, or spleen. Congo red stains were negative. The liver showed long-standing passive congestion. The right lung showed complete atelectasis with no evidence of any tuberculosis. The alveoli of the left lung were dilated with fragmentation of the septa as seen in emphysema. Although intimal atherosclerosis of the larger branches of the pulmonary arteries could be seen, there was a lack of any change within the walls of the smaller pulmonary arteries. This would indicate that most of the resistance responsible for the pulmonary hypertension apparently arose in the small septal vessels. The bronchioles were markedly dilated as seen in bronchiectasis associated with chronic bronchitis.

The anatomical diagnosis was then: (1) cor pulmonale with hypertrophy and dilatation of right ventricle; (2) chronic bronchitis and bronchiectasis; (3) left pulmonary emphysema; (4) right pulmonary atelectasis; (5) thrombosis of right pulmonary artery; (6) atherosclerosis of pulmonary arteries; (7) passive congestion of liver; (8) ascites; (9) left pulmonary edema and bronchopneumonia; and (10) old amputation of right leg.

Discussion

DR. MCCARTHY: The term cor pulmonale is commonly used to describe right ventricular cardiac hypertrophy or dilation occurring independently of left ventricular hypertrophy as the result of increased resistance of the blood flow through the pulmonary circulation. Ayerza in 1901 deserves credit for calling our attention to this syndrome. He emphasized the marked cyanosis, calling them "black cardiacs." Ayerza and his pupils stressed syphilis of the pulmonary artery as the etiological factor. Today there is no reason for continuing the use of the term "Ayerza's Disease" other than of historical interest.

Cor pulmonale is commonly classified into acute and chronic types. Acute cor pulmonale is usually caused by massive pulmonary embolism. It is estimated that it is necessary to occlude at least 60 per cent of the total pulmonary vascular bed before heart failure occurs. Hence most nonfatal cases of pulmonary embolism do not cause sufficient obstruction of the pulmonary circulation to cause heart failure. Chronic cor pulmonale is more common and is due to a wider variety of causes. Spain and Handler[9] have recently given us an etiological classification based upon alterations in the thoracic cage, pulmonary vascular system, and pulmonary parenchyma. Clawson[3] in a study of 5,000 hearts in the records of the Pathology Department of the University of Minnesota collected a total of 118 cases of cor pulmonale up to 1946. The etiological factors in order of frequency were pulmonary tuberculosis, forty-five cases; bronchial asthma, twenty-two cases; bronchiectasis, sixteen cases; pulmonary embolism or thrombosis, nine cases; silicosis, seven cases; emphysema, six cases; pulmonary arteriosclerosis, six cases; chest deformity, six cases; pulmonary fibrosis, two cases; and pressure of syphilitic aortic aneurysm on the pulmonary artery, one case. All of these cases had congestive heart failure at the time of death.

George Higgins[6] at Glen Lake Sanatorium worked on the problem of hypertrophy of the right ventricle in pulmonary tuberculosis. He devised a technique where the ventricles were dissected apart and weighed separately. He took into account the general debility of the patient as a result of tuberculosis and with this debility the decrease in the size of the heart. He found a 40 per cent incidence of hypertrophy of the right ventricle associated with pulmonary tuberculosis. He was of the opinion that the pulmonary emphysema associated with the tuberculosis was the principal underlying factor responsible for the increased pulmonary vascular pressure.

In considering pulmonary arteriosclerosis as a cause of cor pulmonale, we are interested primarily in changes in the small arteries and arterioles, as sclerosis confined to the large arteries cannot cause pulmonary hypertension. Immediately one is faced with the problem whether pulmonary arteriosclerosis exists as a primary phenomenon or is secondary to increased pressure within the pulmonary circulation. The same problem exists in systemic hypertension. Brenner in 1935[1] described what he considered to be primary pulmonary arteriosclerosis. Brill and Krygier[2] in 1941 reported one case of their own and analyzed twenty cases from the literature of primary pulmonary vascular sclerosis. They were careful to exclude pulmonary emphysema, left heart failure, mitral lesions or congenital heart lesions which might have thrown strain on the pulmonary circulation. Cross and Kobayashi[4] recently reported a case of primary pulmonary vascular sclerosis in a twenty-month-old infant. Little is known about pulmonary hypertension and its relationship to pulmonary arteriosclerosis, the problem being very similar to that which exists in systemic hypertension. The recent work of catheterization of the right heart and pulmonary artery with direct measurements of the blood pressure within the pulmonary circulation will help throw some light upon the subject of pulmonary hypertension. Westermark has devised a simple technique of recording the pressure within the pulmonary circulation. By means of a manometer, the expiratory pressure necessary to collapse the pulmonary vessels on x-ray is directly proportional to the pressure within the pulmonary circuit, thus affording a means of early diagnosis of an existing pulmonary hypertension.

Deformity of the thorax as a cause of cor pulmonale is relatively rare. Hertzog and Manz[5] in 1945 collected 135 cases from the literature and added one of their own. The mechanism of the increased pulmonary resistance in these cases appears to be largely on the

(Continued on Page 540)

Case Report

ARTHUS PHENOMENON INDUCED BY THE LOCAL APPLICATION OF PENICILLIN

F. B. MEARS, M.D., and DAVID STATE, M.D.
Minneapolis, Minnesota

ARTHUS, in 1903,[1] noted that if horse serum were injected subcutaneously into rabbits every six days, resorption of serum would take place after the first three of such injections. However, after the fourth injection, infiltration appeared which finally developed into necroses, sequestration and abscess formation. This Arthus described as local anaphalaxis and his observation is universally referred to as the "Arthus phenomenon."

The phenomenon of Arthus has its counterpart in the human being. Such reactions have been reported in the literature since 1909, chiefly in association with the administration of antitoxins. Illustrative cases demonstrate that the Arthus phenomenon results invariably from repeated serum injections, particularly when local serum reactions from a previous inoculation are still present.

Gerlach, in 1923,[1] made a complete microscopic study of the Arthus phenomenon and concluded that the reactions were in no way specific and did not differ from any other inflammatory reaction except in degree. It is believed that the mechanism of the reaction is initiated by an antibody—antigen reaction resulting in arteriolar spasm. The endothelial damage due to the blocking of the vessels by leukocytic and red blood cell thrombi in turn leads to hemorrhage, necroses and slough.

Report of Case

Mrs. S. H. (U.H. No. 769636) was first admitted to the University Hospitals on August 15, 1946, with a history of having noted a painless tumor in the left breast three months prior to admission and a tumor mass in the left axilla three weeks prior to admission. Physical examination revealed an irregular, indurated tumor deep in the inferior portion of the left breast, 10 by 8 by 6 cm. in size and in the anterior part of the left axilla, a hard, matted cluster of nodes, 5 by 3 by 3 cm. Neither tumor was fixed to the skin or underlying structures. The remainder of the physical examination was negative. Blood and urine determinations were within normal limits. X-ray of the chest showed ectasia and calcification of the aorta.

A clinical diagnosis of carcinoma of the breast with axillary metastasis was made and, August 16, 1946, a radical mastectomy was performed under cyclopropane anesthesia. Pathological examination of the 2800 gm. specimen revealed a scirrhous carcinoma of the breast with multiple metastasis to the axillary nodes. Postoperatively the patient received 20,000 units of penicillin sodium intramuscularly every three hours on a prophylactic basis for the duration of her hospital stay; a total of 1,120,000 units were given over a seven-day period. Her course was uneventful and she was discharged from the hospital on August 23, 1946 (Fig. 1).

From the Department of Surgery, University of Minnesota Medical School, Minneapolis, Minnesota.

The wound was dressed on the patient's first clinic visit, August 26, her tenth postoperative day. At this time the skin surrounding the incision in the middle third of the wound over a distance of 6.5 cm. appeared dark; this portion of the wound had been closed under some tension at the time of surgery, though the remaining length of the incision had been approximated with ease. On this date, the patient was started on penicillin in wax and oil, 300,000 units of which were taken in daily intramuscular injections until August 29. At this time, the wound edges of the middle third of the wound were beginning to separate, and it was evident that a slough would occur in this region. The patient was readmitted for debridement and early grafting of the resultant defect.

On admission the involved area of the wound, measuring 5 by 7 cm., was debrided and a wet dressing of 0.5 per cent acetic acid in sterile saline, containing 250 units of penicillin per c.c., applied; in addition the patient was given 50,000 units of penicillin intramuscularly every three hours. The debrided area showed slight infection though the rest of the wound appeared healing and healthy.

On September 3, the patient developed a generalized urticaria, and the edges of the open part of the wound appeared red and angry; there was no associated rise of temperature or pulse. Benadryl, 50 mg. every four hours, was given with some recession of the urticaria; however, the intense wound reaction, in the form of a nonpurulent, necrotizing, intense inflammatory process, spread rapidly to involve three-fourths of the wound. During this period, there was redness and increased heat at the site of the intramuscular injections of the penicillin, though no slough appeared here. On September 5, all penicillin therapy was discontinued and, within the next three days, the inflammatory and necrotizing process in the wound had completely subsided. By September 8, with debridement, the wound presented as a clean, granulating surface.

Comment

Rostenberg and Welch,[2] in studying the types of hypersensitivity induced following the intradermal injections of penicillin in human subjects, noted that in originally nonsensitive individuals who became hypersensitive following repeated injections, the reactions, although eventually developing into a tuberculin type of hypersensitivity, may show transient characteristics simulating the type of reaction seen in the Arthus phenomenon. They postulate that penicillin sodium, injected intradermally, remains in situ for a sufficient time to combine with body proteins, thus forming a heterologous antigen in which the penicillin molecule acts as a hapten. When subcutaneous injections of penicillin were made, no reactions were obtained, and they thought it possible that

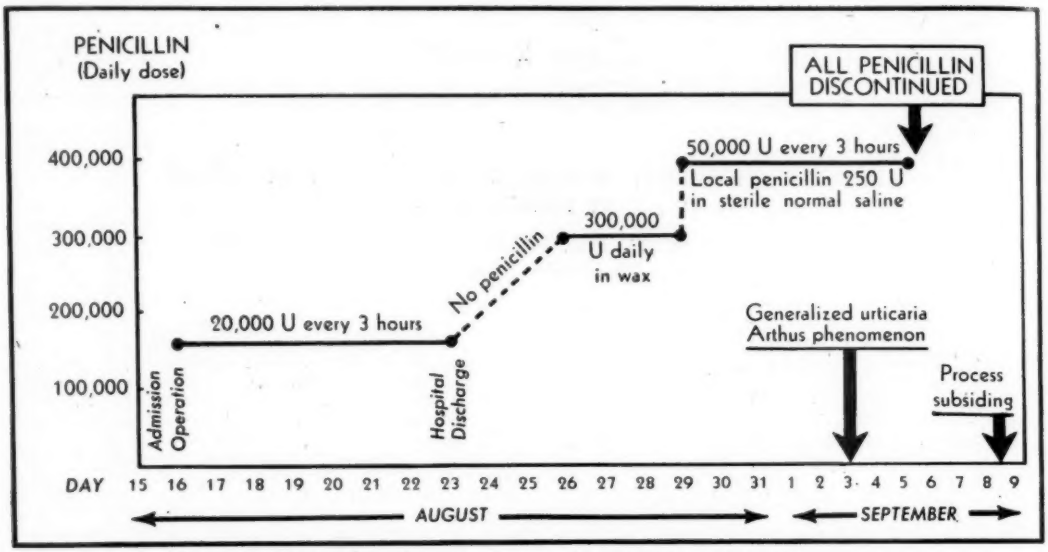

Fig. 1. Record of penicillin therapy in a patient who experienced an Arthus phenomenon.

rapid excretion did not permit sufficient time for the formation of an antigen.

The case presented is believed to represent an Arthus phenomenon induced by the local application of penicillin. It is possible that the penicillin in oil and wax, given five to eight days prior to the reaction was, by virtue of its slow absorption, the factor concerned in the formation of the antigen. It is also conceivable that the antigen was formed by the continued exposure of the wound to the penicillin solution. In either case, the formation of antigen, stimulating the production of antibodies, resulted in a hypersensitive state; the local application of antigen then initiated an antibody-antigen reaction of the type described as local anaphylaxis.

Conclusion

A case is presented in which the local use of a penicillin solution in an open wound in a patient hypersensitive to penicillin resulted in a rapid inflammatory and necrotizing process characteristic of the Arthus phenomenon.

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DANGER OF TRANSMITTING MALARIA BY TRANSFUSION

To the Editor:—I believe it would be desirable to renew a warning to medical practitioners that a danger exists in transfusing recipients from donors who have had a past malarial history.

Although I have no extensive data, the transfer of infection has occurred on numerous occasions all over the country. A case reported by Sharnoff, Geiger and Selzer *(Am. J. Clin. Path.* 15:494 [Nov.] 1945) was of particular interest because blood had been stored in a bank for eight days, yet a malarial infection was transferred. When blood is stored at low temperatures, the parasites seem to exist for a long period. The actual limits of time have not been established, but eight days would seem to be quite an interval for an active blood bank.

I have been told of a soldier who had been overseas under suppressive medication and never had had experience with malaria; yet, when his blood was used in this country many months later, a malarial infection occurred in the recipient. Such an occurrence is rather unusual now, although during the war it was seen quite frequently. Most of the men are now out of the malarious areas; hence that danger is minimized. In several thousand cases seen personally no less than a hundred men first had malaria in this country after withdrawal of the suppressive drug used overseas. One man had been off the drug thirteen months before his first attack occurred.

As a routine procedure I believe physicians should be advised never to use blood from any person who has had a past history of malaria. There is an instance in Denver where a Greek's blood was used and malaria resulted although the man had been away from Greece, where he acquired his original infection, for thirty-seven years.

All returning servicemen should be questioned closely about a postmalarial infection. One instance occurred here in which a man was asked specifically whether he had had malaria and he replied in the negative. However, his blood was infectious for the recipient and, on requestioning, he stated that he was afraid that the patient would be denied blood needed very badly and he thought it was of no importance.

It would seem that a safe time limit for a serviceman in this country after withdrawal from the endemic malaria areas and without a past history of malaria would be two years, provided he had not used suppressive drugs in the interim.

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NOTES ON THE HISTORY OF MEDICINE IN FILLMORE COUNTY PRIOR TO 1900

By NORA H. GUTHREY
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(Continued from April issue)

Jacob Wright Magelssen, a son of Hans Gynther Magelssen, who was a Lutheran minister and "provst," and Drude Catherine Haar Daae Magelssen was born on August 11, 1843, at Aafjorden, a town about seventy miles north of Trondhjem, Norway. His parents were worthy representatives of two distinguished families.

The Magelssen family, dating back to 1350, was originally Hanoverian. In 1756 one of the Magelssen men, the grandfather of Jacob Wright Magelssen, immigrated to Norway and there established the family name which is well known and well represented in all the professions. The Daae family were of an illustrious line that traces back to the old nobility of Denmark. Catharine Haar Daae was born at Saltdalen, Norway, in the district where her father was the provost; her brothers, one of whom was Professor Ludvig Kristensen Daae, were brilliant and distinguished historians, economists and scientists. A provst, it may be said, is an official of the church whose responsibilities are comparable to those of a bishop in that he has supervision over other ministers in a large district.

Hans Gynther Magelssen was remarkable for vision, for ardent work on behalf of his church and his people, and for public spirit, especially in laboring for post roads and public schools, and these qualities descended to his children. To Mr. and Mrs. Magelssen were born nine children, six boys and three girls. Johan, the eldest son, was for many years editor of Oslo's famous *Aftenposten.* Kristian, one of the two sons who came to America, was a Lutheran minister at Highland Prairie, Minnesota, near Rushford. Kristen was a noted sculptor. Next came Jacob Wright, the subject of this sketch. Ludvig, the possessor of remarkable dramatic talent and beautiful singing voice, became, not an artist, as he might well have done, but a wholesale importer. Anton, the youngest son, had marked talent as a painter but, believing that one artist in the family was enough, he followed Jacob's example and became a physician. Of the three daughters, Elizabeth, the eldest, a beautiful and talented woman, was married to Peter Voss, head of a distinguished Latin school which bears his name; Valentine, the son of this marriage, became an eminent jurist. The second daughter, Gyda, ahead of her times, was one of the first women in Norway to go into business for herself, establishing a secretarial bureau. The youngest, Sofie, a linguist, newspaper correspondent

and writer of books, was married to a Frenchman, P. Groth, and spent most of her adult life in Paris. Her husband and her daughter shared her literary interests and occupations. In 1940, because of the war, Madame Groth came to America, to take up residence in New York. In 1943 she was the only member living of the original family group, unless perhaps Ludvig survived.

When Jacob Wright Magelssen was small, he and the other children had a private tutor because the family lived far from a good school. Before he was four years old he learned to read and write and at the ripe age of eight he was sent with his brothers to a large Latin school for boys at Arendanl. Here he began the study of Latin and German; English was not taught in the school at that time. When, at thirteen, he began the study of English, his textbook was Macauley's *History of England*. After three years at the Latin school, the brothers again had a private tutor for two years. Next, Jacob was sent to Nissen's Latin school for boys, in Oslo, and then to the University of Oslo, from which he was graduated in 1861, at the age of eighteen, with the degree of bachelor of arts. In 1863 he passed the examination for the degree of doctor of philosophy.

Shortly after completion of his university work, Jacob Magelssen came to America, landing in New York during the famous week of July 13 to 16, 1863, when the Draft Riots of the Civil War were in progress in that city. Long afterward, in Rushford, Fillmore County, Minnesota, he learned that his colleague and close friend in the village, Dr. H. C. Grover, who served as an army surgeon in the Civil War, had been in New York City with his regiment, part of the troops that put down the riots. In coming to America Jacob Magelssen had hoped for admission to service in an army hospital in some capacity that would fit him to enter a medical school later, but finding this plan infeasible, he decided to spend the months before college opened in the fall in visiting the new Norwegian settlements in Wisconsin near Koshkonong and Stoughton. It was in this Wisconsin community that he met his future wife, Karen Elizabeth Newberg, who was a native of Norway.

In January, 1886, Dr. Magelssen, aged twenty-two and a half years, was graduated from Rush Medical College in Chicago; he had earned his way through by serving as assistant editor of a Norwegian paper, *Emigranten*. For the next few years after his graduation Dr. Magelssen practiced medicine in Koshkonong; the resident physician of the settlement, Dr. Hanson, wanting to return to Norway, persuaded the young graduate, who was urged by his local friends to accept the place, to take over the practice. For a time subsequently in this general period of his life, Dr. Magelssen was ship's physician on one of the boats of the newly established Norwegian-American line, and during this time his wife (he had been married in 1866 at the age of twenty-three) and children lived in Bergen with Mrs. Magelssen's father. When the shipping company had financial difficulty and the young physician was out of a job, he left his family in Norway and returned to Wisconsin, to the scene of his early medical practice. He was lonely, and impulsively on one fine day of that autumn of 1873 he hitched up his horses and started on the drive of five days to Minnesota to visit his brother, The Reverened Mr. Kristen Magelssen, of Highland Prairie, seven miles from Rushford. Winter set in early that year, Dr. Magelssen contracted inflammatory rheumatism, which affected his heart, and for months at his brother's home he was very ill. It happened that soon after his arrival in Highland Prairie, Dr. Karl O. Bendeke, of Rushford, who was planning to make a trip to Norway, heard of

the visiting physician and drove over to ask him to serve in Rushford as locum tenens. By an unforeseen set of circumstances Dr. Bendeke moved permanently to Minneapolis instead of making his visit to Norway, and in the spring of 1874 Dr. Magelssen, pleased with Rushford and the beautiful surrounding country, settled in the village. His wife and children joined him in May. For three years the family lived in rented houses, and then Dr. Magelssen bought the house on the hill which was to be his home for the remainder of his long and useful life.

Under the Medical Practice Act of 1883 Dr. Magelssen received state certificate No. 530 (R). His impress on professional life, as on civic and cultural life in the community and county, was strong. He served his people well and co-operated with the State Board of Health in promoting general welfare. Excerpts from his memoirs concerning the early roads and particularly concerning the epidemic of diphtheria of 1881 and 1882 were quoted in the narrative which preceded the present series of biographical sketches of physicians of Fillmore County.

This man, like his father, was progressive, possessed vision and acumen, and was a tireless worker. Honest and fearless, loyal and dependable, of magnetic personality, a humanitarian and a natural leader, he was a vital factor in accomplishment of measures for the public good. He served a great many terms as mayor of Rushford and, keenly interested in education, was long the president of the school board. The schools of Rushford were among the first in the county to have courses in manual training, home economics and agriculture. Dr. Magelssen was a keen judge of men and, it is said, it was largely through his influence that the local schools were headed by outstanding superintendents, men who justified his opinion of them by going far in their professional field.

Dr. Magelssen's daughters, the Misses Thora and Gyda Magelssen, furnished most of the material on which this sketch is based. In the next few pages appear various verbatim excerpts from their contribution which give vivid highlights on the character and personality of the man:

> He was far ahead of his times in many ways. One of his pet projects was good roads. At every opportunity he preached and pleaded. Much of his argument fell on deaf ears because the people thought that he was considering only his own welfare. Sometimes they would say to him, "We would like you to talk on such an occasion, but don't talk about roads." When he said that every small town was dependent on the farmers 'round about, they laughed at him. . . . Another of his ideas which was ridiculed was that of a community hall.

Dr. Magelssen never lent his time and energies to politics although his abilities and his influence were recognized by many of the political leaders of the state who often tried to enlist him as a party worker. He always refused, saying that he wanted to feel perfectly free to change his opinions and to 'cuss' politicians when they needed it, and also that he could not guarantee not to lose his temper over some clever chicanery. His influence was felt, nevertheless. It was not an uncommon thing to hear a man say, "Well, if a smart man like the doctor is going to vote for so-and-so, that's what I'll do, too." On one occasion, when an important issue was before the town and the citizens were gathered in a mass meeting, discussion was dull and prolix, with much citation of law and precedent. Dr. Magelssen got up, big, forceful and genial: "Fellow citizens, you know what's for the best of this community. Never mind the law. Let's do this thing *right*." And the thing was settled in a few minutes.

In the sense that the term "hobby" means an engrossing and excluding interest in a particular occupation or subject, Dr. Magelssen had no hobbies, for he was interested in everything, although especially in all aspects of nature and particularly in weather, birds, and horses.

He knew every bird so well that he could recognize many birds by their flight and even by the shadow of their flight cast upon the road ahead of him as he drove. As a part of his daily record he set down the date of arrival of each kind or bird in the spring. He always maintained that birds came north at certain dates, regardless of wind and weather. The robin, for instance, was due between the tenth and the fourteenth of March and arrived even when there was snow on the ground. . . . To the doctor a tree was one of God's most wonderful creations. He would cheerfully have imprisoned anyone who wantonly destroyed one. He often paid out his own hard-earned money to buy a load of wood for a poor man who wanted to chop down a lovely tree for firewood. And Heaven help the chopper who wasn't poor! . . . He was always trying to have a city park board, but there again he was ahead of his time.

In his memoirs more pages are devoted to horses than to anything else. He always owned more than he needed or could really afford. He would drive any kind of a horse, even one so crazy that it took two men to hold it while he climbed into the sulky. He would never knowingly sell one to an unkind master, and many times he bought a horse just to rescue it from a cruel owner. When he was the mayor, it was his rule that no team could be left tied outside more than a short time. After that, the police put the team into a livery stable, and the man had to pay the charges to get it out again. If the man put up a fight, the doctor would call round and settle it in person.

He had a brilliant mind, was an omniverous reader and had a wonderful memory, and all this made him an unusual conversationalist. He liked people and liked to talk with them. It mattered little whether the other fellow was an archbishop or an atheist, a banker or an Indian horse trader, the doctor could always contribute something and make the other do the same. . . . He loved poetry and drama. To read a poem was to remember it for life. . . . His courage was unfailing. Hard work and self-denial, responsibility and worry, sorrow and sacrifice were all in the day's work. . . . His compassion for the poor colored all his life. He could never bring himself to charge what his trips were really worth or to press for payment. "No," he would say, "I can't. There is too much sweat and blood on those dollars." . . . He was generous to a fault. His economies were practiced at his own expense, so that he might give to some one else.

No one is perfect, and the doctor had his faults. He had a hair-trigger temper, and very little patience, except with the sick. When he was really angry, he didn't care what he said or did. With his great size and strength he was not a man to meddle with when he was angry. But he never bore a grudge, and when he offended any one he was quick to make amends. . . .

Nationality and creed meant nothing to him, not just because it is a doctor's business to serve all, but because he respected every man's right to his own faith and remembered the religion of his patients. Often, when he was going to a Catholic home, he would look up the priest and take him along.

In his memoirs, in writing in detail of the researches on leprosy of Armour-Hansen and of Boeck, both of Norway but of different schools of thought as to the origin and method of dissemination of the disease, he stated: "Some years later I had the honor of meeting Dr. Armour-Hansen, whose contention was the opposite of Dr. Boeck's. He presented just as many logical arguments, and plenty of proofs in support of his theory. This has always remained in my mind as an instance of the fact that no man's judgment is infallible and that every proposition is open to argument."

In 1897 the telephone first reached Rushford. The only instrument in town was installed in a small central office and the girl at central sent out a messenger for any one who was called. This limited arrangement led to comic incidents and not infrequently to occurrences of potential tragedy. During a winter storm when the wind was high and the roads drifting full of snow, Dr. Magelssen

was obliged to tell one family in which a death was imminent that he probably would not be able to make his usual visit on the following day, but on the pleading of the family he promised to go, making the one condition that if in the meantime the patient, an old man, died, some one was to go to the Hart Exchange and telephone Rushford, to save Dr. Magelssen the trip. On the following day, one of the most terrible in the history of the community, the temperature 50 degrees below zero, the doctor waited until the time that had been specified and then set out. After hours of desperate struggle for himself and his horses he arrived, to find that the old man had died in the previous night and that one of the family duly had telephoned. The message never was delivered; it would be safe to say that the telephone girl did not soon forget Dr. Magelssen's comments when he returned to the village.

His friends were in many places, in all walks of life. Among them were Ibsen, who was also a relative; Bjornson, the novelist, who visited him in Rushford, as Rolvaag also often did; Prestgaard of the *Decorah Posten;* Bishop Lunde, Primate of Norway; Harold Stormoen, the actor; Skovaard, the violinist; Hugh Cooper, the engineer; Governor Nestos; Governor J. A. O. Preus (grandson of the C. K. Preus of Koshkonong); Senators Knut Nelson and Henrik Shipstead.

A friendship which all who knew the men like to remember was that of Dr. Magelssen, Dr. Henry C. Grover, and Dr. H. W. Eldred, the surgeon-dentist, all of Rushford, for each other. Dr. Magelssen was handsome, very tall, large and heavy, but not fat, with unusually broad shoulders and deep chest. He had a broad forehead, a large Roman nose, and heavy dark hair. He always wore a beard. His eyes, intensely blue, held a bright and delighted twinkle, as though the world were a comical and entertaining place, as it was to him. Dr. Eldred was a small wiry man, who also had very bright blue eyes. Dr. Grover was a tall, lean Hoosier, who had a friendly smile and spoke with a slow drawl. Dr. Eldred enjoyed the contrast in size between himself and Dr. Magelssen, who towered above him, and made a point of dancing around the handsome giant, sparring at him in pretended battle.

When any one of these three men came out on the street, any one passing stopped to talk with him, sure of a lively conversation. When two of them came out at the same time, every one around them stopped to listen. When all three of them came out on the street together, a crowd would gather as promptly as for a circus, for it was certain that there would be a most entertaining scene within a few minutes. They were all very funny men, with keen sense of the comic, quick wits and even quicker tongues, and they kept the crowd roaring with laughter. At public gatherings they could hold up all proceedings if they decided to exchange a little lively repartee.

Dr. Grover had been in Rushford about five years when Dr. Magelssen came, and he was kindness itself to the newcomer. They made many hard, long trips together and helped each other in time of need. They spent long hours together in the office of one or the other, to their mutual profit and pleasure; and if there ever was any discord between them, it was never enough for it to have been mentioned at home. There are many instances cited in his memoirs by Dr. Magelssen and cherished by his children of the strong, sweet, lasting friendship among the three men.

In Rushford, in February, 1881, the death of Mrs. Magelssen occurred. Karen Elizabeth Newberg, mentioned earlier in this account, had been born in Bergen, Norway, on September 24, 1844, and she was married in 1866 to Dr. Magelssen. The seven children of the marriage were: Hans Gynther (1867-1902); Drude Catharine (1869-1871); Karen Henriette (Mrs. S. Rue, 1871——); Mathias Peter (1873-1920); Jacob A. O. (1876——), a rancher in Montana; another Drude Catharine (Mrs. Boyd of Minneapolis); and Kristian (1879——), like Jacob, a rancher in Montana.

Dr. Magelssen was married, a second time, to Thora Larsen, who was born on July 16, 1857, the daughter of Dr. Lauritz Larsen, founder and first president of Luther College, Decorah, Iowa. Mrs. Magelssen died in Rushford on July 3, 1908. To this marriage there were born five children: Karen Elizabeth (Mrs. N. M. Ylvisaker, of Minneapolis); Thora, a schoolteacher, of Rushford; Elsie (Mrs. Einar Jenson, of Newell, Iowa); Gyda, of Rushford; Agnes Margot (Mrs. M. C. Hoppin, in Anchorage, Alaska, in 1941).

Jacob Wright Magelssen died at his home in Rushford on January 9, 1931, from the infirmities of old age, in his eighty-eighth year. He had been a practicing physician, ethical, honored and loved, for sixty-five years, of which fifty-seven years were spent in Rushford, where he settled in 1874. Even after he retired from active practice and had given up his office, Dr. Magelssen continued, until a few months before his death, to see his old patients. Fifty-seven years is a long time, in which a physician may be the friend of many generations; and the knowledge in his community that father or grandfather knew "the doctor" when one or both were young, engenders confidence.

> His magnetism touched every one he met. When he came into a house of illness, so big and full of life, so jolly and yet so wise and capable and sympathetic, the whole atmosphere changed. The doctor radiated . . . the hope and strength and cheer of a vital person who loved life and loved his fellow men. "Why," he would say to some sick child, "when your father was as small as you, and was sick . . ." The little patient would smile and the family would relax.

About **Dr. Masse** of Chatfield, Timothy Halloran, a pioneer settler of the village stated in his *History of Chatfield* (1897) written from memory: "Among the practicing physicians of the early days were Dr. Allen . . . and Dr. Masse, who practiced here for a number of years." Other mention of Dr. Masse has not appeared. Dr. Nelson W. Allen was in Chatfield from 1854 until his death in 1876. It is possible that the name "Masse" was confused with that of Dr. D. N. Morse, in Chatfield as early as 1856, who will be mentioned further.

—Mecklenberg, of Wykoff, mentioned in the official directory of physicians licensed in Minnesota in the period from 1883 to 1890, inclusive, as a holder of an exemption certificate under the "Diploma Law" of 1883, was Dr. Frans Josef (Francis Joseph) Van Mackelenbergh, who came to America from Holland in 1866, to Fillmore County in 1872, and who practiced medicine in Fillmore County successively in Forestville, Spring Valley and Wykoff. His death occurred in Wykoff on March 18, 1892. An account of the life of Dr. Van Mackelenbergh follows in alphabetical place.

Roy A. O. Meidell, a graduate of the University of Christiania, Norway, in 1895, was licensed on January 12, 1897, to practice medicine in Minnesota, and on the following January 27 he filed his state certificate, No. 745, in Fillmore County. Further record in Minnesota has been lacking. On July 3, 1899, R. Meidell, aged thirty years, a graduate of the University of Christiania in 1896 [sic], was licensed to practice in North Dakota. He was a resident of Grank Forks County. In 1907 Dr. R. H. Meidell was in Aneta, Nelson County, North Dakota, the only Meidell in the directory of the American Medical Association. In 1912 Rolf Meidell was in Glendive, Montana, in 1914 in Havre; in 1916 he was in Aneta, North Dakota.

Simeon Paul Meredith was born on January 27, 1852, at Middleton, Wisconsin, the son of a farmer who was a native of Wales. After receiving his

early education in the country school near his home, he enrolled as a student at the University of Iowa, in Iowa City, and subsequently for a time he taught the rural school near Middleton. In the next period of his life he qualified as a medical practitioner, and in the middle seventies began his professional career in Jefferson, Wisconsin, and later practiced in Spring Green.

It was probably in 1880 that Dr. Meredith enrolled at the Hahnemann Medical College and Hospital, in Chicago, from which he was graduated in 1882. Shortly after his graduation he came to Minnesota because of ill health, and it has been said that in 1882 he was practicing medicine in Austin, Mower County. In 1887 when, under the Affidavit Law of that year, he received a license to practice in the state, he was living in Plain Prairie. By 1888 he had brought his family to Spring Valley, Fillmore County, and there he remained in successful practice for nearly ten years. (An unverified statement has been noted that in 1897 he was in Owatonna, Steele County.) In February, 1899, he moved from Spring Valley to Pleasant Grove, Olmsted County, where he assumed the practice of the late Dr. Marshall T. Bascomb, who had died on January 28 of that year. A few weeks later, succeeding Dr. Bascomb, he was appointed county physician for the village and township of Pleasant Grove. According to notes from the *Minneapolis Homoeopathic Magazine*, in the spring of 1902 he settled in Grand Meadow, Mower County, near his former location, Spring Valley. By October, 1902, however, he had moved to Windom, Cottonwood County, in the southwestern part of the state, and there he lived for several years before moving to Garden City, southwest of Mankato, in Blue Earth County. From sparse record it would appear that he was in Garden City through 1907 and into 1908; in this period he retired from active medical practice, and in the spring of 1908 established his permanent home in Mankato.

Before leaving Wisconsin, Simeon P. Meredith was married to Fannie E. Glasier, of Bedford, Ohio, the sister of six brothers, most of whom were physicians or dentists. One brother, Gilson Glasier, for more than thirty years, in 1942, had been the librarian of the state law library of Wisconsin. Dr. and Mrs. Meredith were the parents of two children, a daughter and a son. Eva L. Meredith, a graduate of the Windom High School, and a musician, died in 1934. Harlan M. Meredith, who was born on August 22, 1889, at Spring Valley, in 1943 (since 1941) was an employe of the New York Central Railway, in Cleveland, Ohio. In 1942 there were living also Dr. Meredith's brother, George Meredith, in Omaha, and one sister, Mrs. J. F. Fargo, in Los Angeles, California.

Dr. Meredith died in Mankato on September 1, 1930, having suffered many years from bronchitis and asthma. Never in good health, he was not able to enter actively into civic life or to hold public office but applied his limited strength to the practice of his profession. He held respect and liking in the communities of his residence, in all of which he was a home-owning citizen, and left a record of able service to the sick.

Dr. Miller, of Waukokee, Carimona Township, Fillmore County, was mentioned in a county newspaper of January, 1887. The well-known Dr. Luke Miller, of Chatfield and Lanesboro, died in 1881.

(To be continued in June issue)

President's Letter

MEDICAL SERVICE AREA IS KEY TO PHYSICIAN DISTRIBUTION

THOSE of us who were present at the meeting of the officials of the county medical societies of the state on Saturday, March 1, 1947, in Saint Paul, were impressed by a talk which was given by Frank G. Dickinson, Ph.D., director of the Bureau of Medical Economic Research of the American Medical Association. In his discussion he proved that the old method of determining the physician-patient ratio provides an incorrect idea of the efficiency with which physicians are rendering medical service, and he showed further that the key to the question of the availability of medical care and the distribution of physicians may be found in the development of his new concept of medical service areas. Also, he demonstrated in a convincing manner that this method will show, far more accurately than previously used methods, the areas in which physicians practice as well as the availability of medical services.

According to Dr. Dickinson's scheme, the old method of determining the number of people per physician in counties, townships and other political areas is abandoned, and an entirely new concept, based on established marketing principles, is adopted. According to the old concept, it is customary to consider the population in relation to the number of physicians in a political area. One county may have one physician to 1,000 of population, and another county may have one physician to 2,000 of population. Such statistics may be accurate but what significance do they possess? Obviously, very little, because medical care is an economic service which bears no relationship to political boundary lines. Most physicians have patients who come from areas outside the county in which their offices are situated.

Recently, a map of the state of Minnesota has been circulated, in which each county is shaded according to the number of physicians there are per thousand of population. According to this map, white counties have one physician to 1,000 of population or less; black counties have one physician to 3,000 or more persons, and various other shadings are included between the two extremes. With this as an example, Dr. Dickinson brought out the significance of his theory most forcefully. He called attention to the fact that Hennepin and Ramsey counties appeared on the map in white, and Anoka County, which borders these two counties, appeared in black, indicating a ratio of one physician to 3,000 or more people in Anoka County. Obviously, it would be incorrect to assume that people living in Anoka County could not obtain adequate medical care because of the small number of physicians residing in that county. Actually, the people of Anoka County secure much of their medical care in Minneapolis and Saint Paul.

Physicians render service to people who reside in communities which are closely related to the retail trading area, very much as stores draw their customers from small or large areas. A small store may draw customers from an area which covers only a few blocks whereas a large department store may attract customers from a distance of many miles.

The Bureau of Medical Economic Research is attempting to designate medical service areas for the United States. Maps have been sent to all county medical societies. The secretaries of these societies have been asked to indicate on the maps the areas wherein medical care is provided by physicians who reside in primary medical centers within the counties. Not every county includes a primary medical center. A county which is lacking in this respect will be included in one or more of the medical service areas, the primary center or centers of which will lie outside the inadequately supplied county. Much overlapping will come to light. Secretaries in two well-supplied counties, separated by a rural county which does not have a medical center, may each claim that more than half of this rural county is served from a medical center of his county. The secretary of the state medical association will assist the secretaries of the county societies in allocating the disputed territory. At the state level also there will be overlapping, because people who live near the border of a state may look to a large city just across the border for some of their medical service. Elimination of these overlapping interstate areas will require conferences between the state secretaries. Eventually, the border of every medical service area should be drawn so that, in normal times, one or more physicians will reside within the area.

Louis A. Buie

President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor;* GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

SCHOOLS FOR PRACTICAL NURSES

THE dearth of nurses constitutes a complicated problem. With only 31,000 young women enrolled in nursing training schools in 1946, compared with 39,000 in 1938, and with 33,000 hospital beds unavailable because of the shortage of nurses, the seriousness of the present situation for the public and the hospitals is clearly indicated.[1] Among the reasons for the diminution of enrollment in training schools for nurses, probably the main one, is the opportunity for greater financial compensation in other vocations which do not require such a long period of training, and such a great expense, which recently, it might be noted, has been increasing. The many openings for trained nurses in activities outside the field of private nursing have made the scarcity even more acute.

In recent years the educational requirements for certification as a registered nurse have been on the increase. A few nursing schools, including the University Hospital, have instituted a five-year course. The report of the Committee of the American Surgical Association[2] undoubtedly represents the opinion of the medical profession at large on this trend in the nursing field. It is generally believed that a year of training in nursing will qualify a young woman of average intelligence to render valuable bedside nursing at home or in the hospital. The one-year graduate, of course, cannot take the place of the three-year trained nurse in the care of the seriously ill. The three-year course also is a requisite for further study and training for a Master of Nursing degree, qualifying for teaching and other responsible positions.

Through the co-operation of the nursing and medical professions of Minnesota, a bill providing for the certification of practical nurses after a year of training was recently passed by the state legislature, thus adding Minnesota to the list of twenty other states that have passed such a law.

The next step will be the establishing of training schools for practical nurses. The National League of Nursing Education and the American Nursing Association have declared themselves opposed to the establishment of training schools for practical nurses in conjunction with training schools for registered nurses. The shortage of nursing school instructors may well be one reason for such an attitude. On the other hand, there are a number of nurses' training schools in the state which have been forced to close because they could not meet the requirements established by the national organization of nurses. These schools might well be opened for the training of practical nurses. It should not be unreasonable to expect that the national nurses' organizations will aid rather than obstruct the steps proposed to train practical nurses. While some of the members of the State Board of Examiners of Nurses have shown a spirit of co-operation, others have followed the lead of the national organizations.

The training of practical nurses is of necessity a function of the nursing profession. The medical profession in the past has left the training of nurses to that profession. However, the public, the hospitals and the physicians are vitally concerned and are now entering the picture. To meet the situation a Minnesota Advisory Committee on Nursing has been formed, composed of representatives of the Minnesota State Medical Association, State Hospital Association, State Nursing Association, State Board of Health, State Board of Nursing Examiners, Farm Bureau Federation, State Institutions, State Department of Education, and Catholic Hospitals. This committee has sent out a questionnaire to hospital superintendents to obtain vital information in regard to facilities for training more nurses.

The co-operation of individual physicians, as well as the State Medical Association, in furthering the establishment of training schools for practical nurses, is assured.

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1. Editorial: The supply of nurses. J.A.M.A., 133:1156, (April 12) 1947.
2. Resolutions of the American Surgical Association on nursing problems. J.A.M.A., 133:1168, (April 12) 1947.

TRIMETHADIONE (TRIDIONE) IN PETIT MAL

THE reports of two fatalities resulting from the use of tridione for epilepsy constitute a warning to the profession, since this drug is now available on prescription. The previously reported toxic effects of the drug were few and apparently unimportant. The drug appears highly effective in the prevention of petit mal attacks in childhood, but not of grand mal attacks.

In one of the cases reported,[1] a sixteen-year-old girl had received tridione and dilantin each in doses of 0.1 gm. three times a day for six months. The second case[2] was that of a young woman of twenty-three who had been taking tridione over a period of ten months, usually 4 grains a day. She also had taken phenobarbital for the past nineteen years without ill effect. Both individuals developed severe anemia, granulocytopenia, and purpura, which failed to respond to treatment. At autopsy the bone marrow showed a marked reduction in hemopoietic tissue.

Apparently, tridione must be put in the same category as amidopyrine (to which it is similar in structural formula) in its effect on the bone marrow and on leukocyte production. While idiosyncrasy doubtless explains the effect of both drugs on the bone marrow, and is comparatively rare, yet the patient receiving tridione should have periodic red and white cell counts, and any toxic manifestations such as gastric irritation, nausea, skin eruptions or blurring of vision, should indicate the cessation of its use. It should not be used in the presence of any blood dyscrasia.[3]

1. Harrison, Francis F., et al.: J.A.M.A., 132:11, (Sept. 7) 1946.
2. Mackay, R. P., and Gottstein, W. K.: J.A.M.A., 132:11, (Sept. 7) 1946.
3. New and Nonofficial Remedies: J.A.M.A., 133:320, (Feb. 1) 1947.

DEMEROL

DEMEROL hydrochloride, a synthetic preparation, has been accepted by the Council on Pharmacy and Chemistry, according to the report which appeared in the *Journal of the American Medical Association* of September 21, 1946. The report indicated that the drug has a morphine-like analgesic effect which lies between that of codeine and morphine. While its action is in part due to depression of the parasympathetic endings, it is primarily the result of direct papavarin-like depression of the muscle fibers. Unlike morphine, demerol is not a potent hypnotic.

In an editorial which appeared in our March, 1946, issue, attention was called to the value of demerol in obstetrics. Dispensed in ampoule form with 50 mg. in each c.c., a dose of 100 mg. is given subcutaneously or intramuscularly at the onset of labor, and one or two additional doses are given as required. It is said that demerol does not prolong labor and does not produce a depression of respiration in the infant. Scopolamine is sometimes given with the first dose of demerol because of the former's amnesia effect, but this often makes the patient uncontrollable. The addition of a barbiturate adds a desirable sedative effect.

Demerol may be used to prevent the withdrawal effects in morphine addicts. It should be emphasized, however, that experience has shown that addiction to demerol is not uncommon. In accepting demerol, the Council has required manufacturers to mention the possibility of addiction, and will issue a report in the future on this phase of the use of demerol.

CARE

THERE is something big and fine about this philanthropic organization known as CARE (Cooperative for American Remittances to Europe, Inc.) which is composed of twenty-seven major American welfare agencies, and is operating on a nonprofit government-approved basis. Among the agencies concerned are the American Christian Committee for Refugees, American Friends Service Committee, American Jewish Joint Distribution Committee, Ukranian, Lithuanian, and Yugoslav Relief Committees.

Packages of food, weighing 21 pounds and containing meat, fats, sugar, milk, flour, chocolate, coffee and other essential foods, are already packed and shipped and awaiting orders to be sent to a designated needy person anywhere in Europe except Russia and the Russian zone of Germany (shame on you, Russia). Ten dollars sent to CARE, 50 Broad Street, New York 4, New York, will start a package on its way. Or for the same amount, a Blanket Package containing among other things two army surplus blankets, or a Woolen Package containing woolen cloth, cotton lining, thread, et cetera, can be similarly sent to an address in Europe.

THE STATE MEETING

The ninety-fourth annual meeting of the Minnesota State Medical Association will be held Monday, Tuesday and Wednesday, June 30, July 1 and 2, with headquarters at the Duluth Hotel, Duluth, Minnesota.

This meeting brings together medical men from five states and two provinces of Canada, men in all branches of medicine—general practitioners and specialists.

Duluth, at the head of the Great Lakes, with its refreshing climate, its superb recreational facilities, its central location and its accessibility, is situated in the heart of the Upper Midwest vacation land and is an ideal location for the 1947 convention.

The dates have been selected especially to provide busy Midwest physicians with an inviting opportunity to combine participation in one of the top medical meetings of the year with a vacation over the Fourth of July in Minnesota's scenic Arrowhead Country.

Out-of-State Speakers

Nationally prominent medical men from out-of-state will appear on the program, both for the general meeting and for the special sectional meetings being held by the Minnesota Academy of Ophthalmology and Otolaryngology, the Northwest Pediatric Society, the Minnesota Orthopedic Club, the American College of Chest Physicians, the Minnesota Radiological Society and the Minnesota Society of Clinical Pathologists.

Noted out-of-state speakers include:

Dr. Robert E. Gross, Children's Hospital, Boston, Massachusetts, specialist in heart surgery.

Dr. George E. Shambaugh, Jr., of Chicago, Illinois, Professor of Otolaryngology at Northwestern University.

Dr. M. L. Sussman of New York City, who will deliver the annual Russell D. Carman Lecture in Radiology.

Dr. Benedict Frank Massell of Boston, specialists in rheumatic fever.

Dr. John R. Neefe, a fellow of the National Research Council, Philadelphia. (Dr. Neefe was formerly with the University of Minnesota Medical School.)

Dr. Joseph Molner, Associate Professor of Preventive Medicine and Public Health, Wayne University, Detroit, Michigan, and Medical Consultant for the National Foundation for Infantile Paralysis.

Mrs. Charles W. Sewell, Administrative Director of the Women's Division of the American Farm Bureau Federation, Chicago, Illinois.

Dr. Haven Emerson, School of Public Health, Columbia University, New York.

Drs. Dean Smiley and Fred V. Hein, Consultants in Health and Physical Fitness of the American Medical Association, Chicago, Illinois.

Mr. Tom Collins, Publicity Director, City Mutual Bank and Trust Company, Kansas City, Missouri (Banquet Speaker).

Program Features

A new lectureship has been added this year, with the selection by the Minnesota Society of Clinical Pathologists of Dr. Elexious T. Bell of the Department of Pathology, University of Minnesota, to give the first annual A. H. Sanford Lecture, honoring the work of Dr. Sanford, a pioneer clinical pathologist of this country, who is also a member of the Minnesota State Medical Association.

The A. H. Sanford lectureship was established and dedicated to the Minnesota State Medical Association by the Minnesota Society of Clinical Pathologists. Dr. Bell will speak on the subject, "The Pathology of Diabetes Mellitus."

Another feature will be a booth, where demonstration of interesting gross pathological specimens by the members of the Minnesota Society of Clinical Pathologists will be conducted during morning and afternoon intermissions throughout the three-day session.

This year, as in years past, the last afternoon of the annual meeting will be devoted to a program discussing some important current problem. This meeting is thrown open to the public, and special invitations are sent to representatives of interested groups. This year's question for discussion is the problem of improving health in rural areas, the title chosen for the program being "Rural Health—A Joint Responsibility." In addition to MSMA members, invitations are going to hospital administrators and hospital boards, nurses and representatives of the AFL, CIO, the Farmers Union, the Railroad Brotherhood and the Minnesota Farm Bureau Federation. The program is planned so as to provide an exchange of ideas among farm people, hospital authorities and physicians and a chance for each group to present its views of the various phases of the problem and its proposed solutions.

The Scientific and Non-Scientific Committees of the Association will again hold their annual Committee Breakfasts, preparatory to making their reports to the House of Delegates.

Twenty Roundtable Luncheons—ten on Tuesday and ten on Wednesday, both at 12:15 p.m., will also be held again this year. Recent developments in scientific medicine will be discussed.

The following Special Sectional Meetings are scheduled for this year's program, each of them open to all convention visitors:

Monday, June 30

9 a.m.—Minnesota Academy of Ophthalmology and Otolaryngology.

Tuesday, July 1

9 a.m.—Minnesota Orthopedic Club.

2 p.m.—American College of Chest Physicians.

Wednesday, July 2

9 a.m.—A special meeting devoted to investigative work, with speakers presenting latest information on research developments.

Social Events

The Annual Golf Tournament this year will be held at the Northland Country Club on Sunday, June 29, at 1 p.m. Attractive prizes are provided and arrangements are being made by a committee of which Dr. R. L. Nelson, 324 W. Superior St. Duluth, is chairman.

As a special feature, members are invited to participate in a deep-sea fishing excursion along the North Shore of Lake Superior, where catches range up to 55 pounds. No fishing equipment or license is necessary; just appropriate fishing togs. Arrangements are being made through Dr. Karl E. Johnson, 2031 W. Superior Street, Duluth.

"Variety Night" will be held in the Ballroom of the Hotel Duluth at 7:30 p.m. Monday, June 30. Special music and entertainment with refreshments are planned. All convention visitors and wives are invited.

The Annual Banquet, at which the presentation of the Fifty Club certificates and pin and the presentation of the Southern Minnesota Medical Association Medal for the best individual scientific exhibit will be made, is scheduled for 7:00 p.m. Tuesday, July 1. The Presidential Address will be given by Dr. Louis A. Buie of Rochester. Guest speaker is Mr. Tom Collins, Publicity Director, City Mutual Bank and Trust Company, Kansas City, Missouri.

The American College of Chest Physicians will have a luncheon at 12:30 p.m., Tuesday, July 1, in the Tally-ho Room of the Holland Hotel. Reservations are being taken care of by Dr. G. A. Hedberg, Nopeming Sanatorium, Nopeming.

Alumni of Nu Sigma Nu, medical fraternity, will get together Monday evening at 5:30 for a social evening and dinner at the Duluth Athletic Club. This is the first reunion since the meeting before the war.

The Minnesota Academy of Ophthalmology and Otolaryngology is planning a 12:30 p.m. luncheon at The Flame on Monday, June 30. Reservations are being handled by Dr. Archie Olson, 815 Medical Arts Building, Duluth.

A Medical Women's Luncheon will be held at 12:15 p.m. at the Kitchi Gammi Club, reservations being made through Dr. Marie K. Bepko, Cloquet.

All physicians who served in World War II are invited to a luncheon meeting at 12:30 p.m., Monday, June 30, in the Tally-ho Room of the Holland Hotel, sponsored by the Society of Medical Veterans in Duluth. Purpose of the meeting is to give returned medical officers a chance to air their grievances with regard to the manner in which medical departments of the Army and Navy were administered during the war. All former medical officers are invited to come prepared to offer constructive criticism. Reservations are in charge of Dr. Karl E. Johnson, 2031 West Superior Street, Duluth.

A Minnesota Surgical Society luncheon will be held at 12:30 p.m., Tuesday, July 1, at The Flame. Make reservations through Dr. M. G. Gillespie, 205 West Second Street, Duluth.

Exhibits

One of the largest technical exhibits in the history of the Association will be on display in the Duluth Armory. These exhibits will be open for inspection each day beginning at 8 a.m. Arrangements have been made so that both the General Sessions and the Special Sectional Meetings will be recessed both in the morning and in the afternoon for 45-minute periods to permit convention visitors to view the exhibits, demonstrations and the scientific cinema.

There will be a series of five obstetric manikin demonstrations, arranged by the Committee on Maternal Health and sponsored by the Minnesota Department of Health. Three of these will be given in the Duluth Armory. The first at 1 p.m., Monday, June 30, by Dr. Willis E. Brown, Associate Professor of Obstetrics and Gynecology, University of Iowa Medical School, will be repeated at 5 p.m. the same day.

On Tuesday, July 1, Dr. Ralph E. Campbell, Associate Professor of Obstetrics and Gynecology of the University of Wisconsin Medical School, will give two demonstrations, one in the Arrowhead Room of the Hotel Duluth at 12:15 p.m., and the second at the Duluth Armory at 5 p.m.

On Wednesday, July 2, at 12:15 p.m., the final obstetric demonstration will be given by Dr. Mancel T. Mitchell, Clinical Assistant Professor of Obstetrics and Gynecology, University of Minnesota Medical School. This will be held in the Arrowhead Room of Hotel Duluth.

Radiological and Pathological Demonstrations will also be given. Among the scientific exhibitors this year are such organizations as the Minnesota Safety Council, the Minnesota Nurses Association, the Minnesota Public Health Association, the American College of Physicians and Surgeons, the Minnesota Department of Health, the Minnesota Society for the Prevention of Blindness, collaborating with the Department of Ophthalmology of the University of Minnesota, the Division of Vocational Rehabilitation of the State Department of Education, the American Medical Association, the Minnesota State Pharmaceutical Association, and the Minnesota Cancer Society. The Minnesota Society of Clinical Pathologists and the Minnesota Radiological Society are also sponsoring exhibits, as the State Committee on Tuberculosis.

Business Sessions

The usual business sessions will, of course, be held. The Council will have meetings on Saturday, June 28, and all during the convention. The House of Delegates will meet on Sunday, June 29, the day before the convention officially opens, and also on Monday, June 30, the first day of the convention.

Hotel Reservations

It is important that hotel reservations be made at once at the Association office, 496 Lowry Medical Arts Building, Saint Paul 2, Minnesota.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

COUNTY OFFICERS HEAR PROGRESS REPORTS OF MSMA PROGRAMS

(Continued from previous issue)

Viewpoint of Farm Bureau

An able spokesman for the farm people, heard at the County Officers meeting held March 1, was Mr. J. S. Jones of Saint Paul, who is executive secretary of the Minnesota Farm Bureau Federation and one of the members of the Board of Regents of our State University.

His comments generally paralleled those of Dr. Larson, indicating that the medical profession and farm people see eye to eye on their common medical problems, but that in their solution, farm leaders feel there is much to be desired.

Speaking for the 60 thousand farm families who are members of this organization, Mr. Jones reported that prepayment medical service is uppermost in the discussions of rural people these days, and running a close second are demands for adequate hospital facilities and medical and nursing personnel.

Nurse Shortage Plagues Rural Communities

The unfilled gap left in the ranks of registered nurses by recruitment for military service and subsequent attractive opportunities elsewhere were lamented by Dr. W. H. Valentine of Tracy in drawing the attention of the county officers to the present plight of many rural hospitals. To relieve this critical situation, the training of girls for licensure as practical nurses was offered as a partial solution by both Dr. Valentine and Miss Thelma Dodds, R.N., president of the Minnesota Nurses' Association. Both speakers recognized the need for a concerted recruitment drive for all types of candidates for nurses training as the present flow of student nurses into classrooms is not keeping pace with the facilities that are available.

Dr. Valentine charged that the doctors had a bigger stake in a broad state nurse recruitment program than their efforts in that direction to date would indicate.

AMA Officials Describe Changing Medical Order

Leading off the discussion at the evening session, Dr. George F. Lull, secretary and general manager of the American Medical Association, dwelt at some length on the facilities which the AMA stands ready to offer the county medical societies to assist them in working out problems which the changing order in medical practice has produced.

The transition that is taking place, Dr. Lull said, is the result of "extrinsic things that are brought in from the outside, which has led to a changed concept of what medical service implies." As an illustration, he pointed to the United Mine Workers Health and Welfare fund, which could very well set a pattern for other industries.

Closer Liaison with County Medical Societies

An immediate objective of the AMA, Dr. Lull told the county officers, is to establish a closer liaison with the county medical societies to make them more aware of the activities carried on by the parent organization. As a means to that end, the Secretary's Letter was started recently to carry information to the county and state units about its deliberations and undertakings. In this connection, also, he announced that at the time of the centennial observance and annual meeting in Atlantic City in June, the AMA has scheduled a County Officers meeting for Sunday, June 8, to which all county officials who attend the national meeting are invited. It is planned at that meeting to have informal discussions on subjects that seem to be of greatest interest to the people who head up the grass roots of organized medicine.

Noting the importance of prepayment plans in the scheme of things medical, Dr. Lull described the services being offered by the recently created Division of Prepayment Plans within the Council on Medical Service, through which the seal of acceptance of the AMA is given to prepayment plans that qualify by coming up to certain standards. As a related, though independent, organization, he drew attention to Associated Medical Care Plans, Inc., working closely with the Council on Medical Service for the purpose of devising methods to establish some degree of reciprocity among the various prepayment plans in existence.

"It is when doctors step out of their role of scientists to become businessmen that controversy arises," Dr. Lull said. This is particularly true, he reflected, during this formative period when such a variety of prepayment plans are being launched.

The complete answer to the problem of providing prepayment medical service is not yet in sight, Dr. Lull told the doctors. It may well embrace several types of insurance engendering lively competition, which will keep the rates down, and will, in all probability, give the public a better service than if they were operated on a more monopolistic basis.

Public Relations Responsibility of Individual Doctor

The AMA has been accused of failure in its public relations, Dr. Lull said. It was his conviction, however, that the building up or breaking down of public relations for the medical profession is actually almost entirely in the hands of the individual doctor and his personal relationship with his patients—a relationship that determines whether the public is going to think ill or well of the profession as a whole. No amount of newspaper or other publicity, however striking, is likely to alter the judgment of the public, formed on the basis of personal experience with the family doctor, in Dr. Lull's opinion.

As an excellent health education medium, he urged the county societies to avail themselves of the transcribed health platters, which may be borrowed from the AMA headquarters for local station rebroadcasts. Many stations, Dr. Lull said, donate a certain amount of time for public interest programs and would be glad to make use of these transcriptions.

The county officers heard that eleven publications, including the *Journal AMA*, with a weekly circulation of over 130,000 are all a part of the routine of the headquarters staff, along with the keeping of a watchful eye on legislation thrown into both national and state hoppers.

Supply of Medical Service

Speaking as a statistician and economist, Dr. Frank G. Dickinson, director of the American Medical Association's Bureau of Medical Economic Research, presented a different approach in his discussion of the supply of medical service from what is ordinarily heard.

With considerable emphasis, he declared that the supply of medical service cannot be even faintly indicated by the physician-population ratio of a county, although this is the common yardstick used in all current surveys to measure the adequateness of medical service.

"The traditional physician-population ratio by county has no economic meaning whatsoever," he contended. He queried the doctors about the number of patients from towns outside of the county in which their offices are located as proof of his contention that *trading areas*—not county boundary lines—more properly determine the outline of medical service areas.

The second stage of a study of supply, he said, involves a definition of a "unit of supply of medical service." To quote Dr. Dickinson:

> "Every definition I have discussed with my associates has failed to get general approval. Shall one hour of a doctor's time be the unit of supply?
>
> "'No,' my colleagues say, 'it is the amount of work that a doctor can do in one hour which is the unit of supply.'
>
> "Or shall one patient visit be considered a unit of supply? This, too, my colleagues reject because what the doctor does while he is visiting the patient is the real unit of supply."

He concluded, therefore, that until a practical and efficient unit has been agreed upon, one cannot know very much about the functional aspects of supply. One cannot say that a ratio of 800 persons per physician, or 500 persons per physician, or 1,000 persons per physician is adequate unless one can measure in fixed, unchanging units the amount of medical service which one physician can supply, according to Dr. Dickinson. A doctor seeing most of his patients in the hospital, supplies a greater number of units of medical service than a doctor who has to spend

one-third or one-half of his time in his automobile en route to visit patients.

Minnesota "Medical Service Area" Map Studied

A map of medical service areas in Minnesota, marked off by county medical society secretaries, co-operating in a joint project sponsored by the State Association and the AMA, furnished an interesting study and was the subject of Dr. Dickinson's concluding remarks.

Typical of chartered maps prepared by other state medical associations, Dr. Dickinson said, was the general overlapping of medical service areas throughout the state as shown on the map, which reflected, also, an overlapping in trade areas.

These areas, he explained, were determined by the relative attractiveness of the retail stores in different towns—upon the transportation facilities available, especially automobile highways, and upon other attractions such as amusement and service facilities represented by doctors, dentists, hospitals, lawyers, repair shops, beauty parlors and various agencies. Obstacles such as toll bridges, poor roads and congested highways reduce the size of trade areas, Dr. Dickinson said.

In like manner, they cut down the medical service areas which normally include one primary trading center, which draws a considerable amount of trade from surrounding territory, and a number of secondary trading centers representing small towns having one or more physicians.

BORDER STATE DOCTORS MUST HEED NARCOTIC REGULATIONS

Because Minnesota is one of the states bordering on Canada, doctors in this state are sometimes caused considerable embarrassment and inconvenience by the enforcement of certain federal narcotic regulations, about which they have not been informed.

The specific law that they unwittingly break is the Narcotic Drugs Import and Export Act which makes it UNLAWFUL FOR A PHYSICIAN TO CARRY NARCOTIC DRUGS IN HIS MEDICAL BAG BACK AND FORTH BETWEEN THE UNITED STATES AND MEXICO AND THE UNITED STATES AND CANADA.

Narcotic drugs found in the possession of a physician when he re-enters the United States are seized and forfeited in compliance with this regulation. This information is being brought to the attention of state physicians in order that they may be correctly informed with reference to this provision of the federal law and saved the unnecessary embarrassment.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

230 Lowry Medical Arts Building, Saint Paul, Minnesota

Julian F. DuBois, M.D., Secretary

David V. Bush, "Health Lecturer," pays $1,000 Fine After Conviction by Jury in Minneapolis

Re State of Minnesota vs. David V. Bush

On April 17, 1947, David V. Bush, sixty-five, Mehoopany, Pennsylvania, was convicted by a jury of seven men and five women in the District Court at Minneapolis, Minnesota, of the crime of practicing healing without a basic science certificate, following a trial lasting eight days. The jury, after listening to the evidence presented by the State of Minnesota, and the testimony offered by Bush and eleven of his followers, needed less than forty-five minutes to find Bush guilty as charged.

Bush, an itinerant health lecturer, who gives his home address as Mehoopany, Pennsylvania, but whose pills, vitamins and other concoctions bear the address of 17234 South Main St., Gardena, California, came to Minneapolis about February 15, and advertised that he would give a health lecture at the Wesley Temple Gymnasium on February 19. The advertisement stated that a collection would be taken up. Knowing in advance Bush's method of doing business, the Minnesota State Board of Medical Examiners immediately ordered an investigation made of his activities. This resulted in a conference with Inspector Eugene Bernath of the Minneapolis Police Department, and police officers were assigned to co-operate with representatives of the Medical Board in following Bush's activities. During Bush's health lecture he announced that he would conduct a so-called health class at the Dyckman Hotel, Minneapolis, commencing the next evening, February 20, and continuing until March 21. Bush also announced that a fee of $3.00 would be charged each person attending the health class. Police officers and a representative of the Medical Board registered for the class. During the next four weeks Bush, under his claim of "free speech," berated the medical profession, law-enforcement officers and others. He would also describe the symptoms of various ailments and would attribute the ailment to the lack or deficiency of the body in certain vitamins and minerals. At the conclusion of this build-up, Bush then offered for sale various pills, powders and other concoctions for which he charged sums ranging from 75 cents to $2. His first lecture was attended by approximately 600 persons and his paid health class was attended by approximately 200 persons, about half of whom purchased some of Bush's preparations each night. When the State of Minnesota was in possession of the facts, the police stepped in and Bush was arrested on March 19, 1947. He fought the case all the way, demanding a preliminary hearing in Municipal Court which was given him, and at the conclusion of which he was held to the District Court for trial by Judge Paul J. Jaroscak under cash bail of $2,000, which was furnished. Bush then demurred to the information and

this was overruled by the Hon. John A. Weeks of the District Court of Hennepin County. At the trial, among other things, Bush stated that he had written thirty-two books, had an honorary Ph.D. Degree conferred upon him, and that he was a regularly ordained minister. He also stated that he had been a peanut butter salesman, an actor, and a health lecturer. Following the verdict of guilty in the District Court, the Hon. Levi M. Hall sentenced Bush to pay a fine of $1,000 or to serve nine months in the Minneapolis Workhouse. The Court granted Bush a stay until May 5, 1947, so that he could appeal the case to the Supreme Court of Minnesota if he so desired. However, on April 23, 1947, Bush decided to pay his fine and so far as is known has left the State of Minnesota.

The Minnesota State Board of Medical Examiners desires to express its appreciation for the very fine cooperation received from the Minneapolis Police Department and, particularly, from Inspector Eugene Bernath, police-woman Gladys Cook and the other officers who were assigned to the case. The Medical Board also believes that the splendid results achieved in this case would not have been possible had it not been for the excellent manner in which the trial was conducted for the State of Minnesota by County Attorney Michael J. Dillon, Otto Morck, first assistant county attorney, and Per M. Larson, assistant county attorney.

Saint Paul Painter and Machinist Convicted of Criminal Abortion

Re State of Minnesota vs. Thomas F. Jackamore

On March 27, 1947, Thomas F. Jackamore, fifty-six, 461 Holly Avenue, Saint Paul, Minnesota, was sentenced by the Hon. Royden S. Dane, Judge of the District Court of Ramsey County, to a term of two to eight years at hard labor in the State Prison at Stillwater, following Jackamore's plea of guilty to an information charging him with the crime of abortion. On March 28, 1947, Jackamore was taken before the Hon. Robert V. Rensch, Judge of the District Court of Ramsey County, who had previously, on September 17, 1946, placed Jackamore on probation at the time of his conviction for a similar offense. Judge Rensch made an order on March 31, 1947, revoking the stay of sentence in the previous case and ordered Jackamore to serve two to eight years at hard labor in the State Prison in addition to the sentence imposed by Judge Dane. This means that Jackamore will have to serve four to sixteen years because of his two convictions of the crime of abortion.

In the present case, Jackamore was arrested and charged on March 19, 1947, with the crime of abortion. It was learned that Jackamore had performed ten or twelve criminal abortions during the six months that he was on probation. When arraigned in Court, Jackamore denied his guilt, but subsequently withdrew his plea of not guilty and entered a plea of guilty. Jackamore admitted receiving $150 for each of his criminal abortions which were performed by means of a catheter. Jackamore stated to the Court that he had previously earned his living as a painter and machinist. He has no medical education and holds no license to practice any form of healing in the State of Minnesota. Jackamore was previously convicted in September, 1934, at which time he pleaded guilty to grand larceny in the second degree for participating in the theft of a typewriter from the State of Minnesota. Jackamore served sixty days for that offense.

The Minnesota State Board of Medical Examiners wishes to acknowledge the very fine work done in this case by the Saint Paul Police Department under Chief Charles J. Tierney, and also the splendid work done by Mr. James F. Lynch, County Attorney of Ramsey County. Jackamore has been taken to the State Prison to commence his sentence and it will, undoubtedly, be several years before he is released.

CRUVEILHIER-BAUMGARTEN SYNDROME

(Continued from Page 508)

Other cases will appear, however, which clinically will seem to fall into the group with Cruveilhier-Baumgarten disease, but in which the true anatomic and pathologic condition may not be apparent without necropsy. Unfortunately there is no accurate method of classifying these cases without necropsy.

The case which was just reported falls, I believe, into the group of cases of Cruveilhier-Baumgarten syndrome. This syndrome as was indicated by the review of the literature is characterized by portal hypertension plus evidence of excessive umbilical circulation in the form of an abdominal venous murmur or thrill. In a small group of cases in which this syndrome is present, the necropsy findings may reveal a small liver with little or no fibrosis, a patent umbilical vein and usually splenomegaly. In this small group of cases a distinct etiologic and clinicopathologic disease entity may be present which has been designated Cruveilhier-Baumgarten disease.

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Minnesota Academy of Medicine

Meeting of January 8, 1947

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, January 8, 1947. Dinner was served at 7 o'clock and the meeting was called to order at 8:15 by the president, Dr. Ernest M. Hammes.

There were fifty-six members and four guests present.

The first order of business was a discussion of attendance which was discussed by Drs. Lepak and Hall. Dr. Lepak made a motion that the rules in the Constitution be adhered to, and his motion was carried on vote of the membership.

Dean Harold Diehl of the University of Minnesota Medical School was introduced as toastmaster by Dr. Hammes, and made a few well-chosen remarks. Dr. Diehl then introduced Dr. Sweitzer who read his address as retiring president.

PENICILLIN IN THE TREATMENT OF SYPHILIS

S. E. SWEITZER, M.D.
Minneapolis, Minnesota

One of the most interesting subjects in the history of medicine is that of the treatment of syphilis. This has been recently covered in an admirable manner by Moore.[8] He reviewed the chemotherapy of syphilis from 1493 to 1944—a period of 451 years—and divided this into three time periods. The first, lasting 410 years, ran from 1493 to 1903. In this period the treatment of syphilis was entirely empirical and not of much value until about the year 1500 when mercury began to be used and was given in various ways: by mouth, by inhalation, by inunction, and later by injection either intramuscular or intravenous.

The second period ran from 1903 to 1943, or forty years, and saw many changes and much new information about the disease. In 1903, syphilis was for the first time transmitted to experimental animals by Metschnikoff and Roux. In 1905 the treponema pallidum was discovered by Schaudinn, and in 1907 the blood test for syphilis was developed by Wassermann, Neisser and Bruck. These two epoch-making advances were of immense help in the study of the biology of syphilitic infection, and a help in the diagnosis and for determining the effects of treatment.

In 1909 the modern chemotherapy of syphilis began with the discovery of salvarsan "606" by Ehrlich and Hata. This was accomplished after an enormous amount of experimental work by these co-workers. Through the years since 1909 a very good method of treatment was worked out with the use of arsenicals and bismuth, which had taken the place of mercury. This required a continuous treatment of from two to three years, which, besides being an expensive method, left much to be desired from a clinical standpoint, as a treatment of such long duration caused many of the patients to let the treatment lapse before they were cured.

Later an effort was made to give the arsenicals by a continuous drip method over a period of five days. This was later modified by the syringe method. Neosalvarsan was used first and soon replaced by mapharsen. This method was found to be risky, and many deaths occurred from encephalitis, so its use was discarded in many clinics.

The last period in the chemotherapy of syphilis runs from June, 1943, to the present, and marks a real revolutionary change in our concept of what drug or drugs to use and how long to use them. The effort to find a safe and lasting cure is not ended, and changes will and are being made as various methods are tried and evaluated in clinics all over the country.

It all began in June, 1943, when Mahoney, Arnold and Harris[7] demonstrated that penicillin was effective in early syphilis in the rabbit and in man. Because of the importance of the control of the disease, and also of conserving manpower in wartime, an organized investigation of the uses of the drug was begun with the co-operation of the military and governmental agencies and civilian clinics and laboratories.

With the use of penicillin by the army and navy and in many intensive treatment centers, a vast number of cases have been treated by this drug, and many methods have been tried. One of the most important treatment centers was the one set up in Chicago, and much fine work was done there with the very large service that they enjoyed.

The early reports on the results in penicillin-treated cases were glowing and every syphilis clinic in the country started its use as soon as the drug was available. It was found to be a great advance in the therapy of syphilis and to have no mortality attending its use. This happy state of affairs went on until early in 1946 when reports of frequent relapses and slow response to treatment began to appear in the literature, and it became obvious that something had happened to the penicillin.

Because different strains of *Penicillin notatum* and *Penicillin chrysogenum* are used in the manufacture of penicillin, and because different techniques are used in production, five different fractions have been identified. They are F, G, X, K, and dihydro F. Penicillin K is apparently rapidly destroyed or eliminated in the body, and therapeutic levels are not achieved or maintained in the body fluids following ordinary doses.

The early penicillin used was predominately G and was very efficacious. For some months in 1945 all penicillin began to contain increasingly larger amounts of the K factor, and this accounted for the poorer results. The present penicillin is again up to the early qualities and

there is an ever-growing possibility that an even better synthetic penicillin will be forthcoming. However, none better than penicillin G is now available.

On February 7 and 8, 1946, there was a meeting of the National Research Council of the United States Public Health Service in Washington, D. C., at which reports were made of studies in forty-three clinics. Some of these papers were later published in the *Journal of the American Medical Association* and give us a summary of what conclusions can be drawn as to the value of penicillin therapy up to that time.

Generally speaking, the earlier in the course of the disease treatment is begun, the better the clinical result. Best results are obtained in the primary sero-negative and early sero-positive cases. Much as with the older form of treatment, there is a distinct drop in the percentage of good results in the cases of secondary syphilis, and more or less indifferent results in late and latent cases of the disease.

It has been found that the administration of mapharsen and penicillin, or penicillin and bismuth, or all three together, give better results than penicillin alone.

The Committee on Medical Research and the United States Public Health Service in a recent report given out show that 6,558 syphilitic patients have been treated with twelve different treatment schedules.[2] The percentage of failure eleven months after treatment was 15 per cent in patients that had received 2,400,000 units of penicillin. By combining 1,200,000 units of penicillin with bismuth, 0.6 to 1 gm., the percentage of failures was cut one-half, as was the case when 300,000 units of penicillin were combined with 320 mg. of mapharsen.

Ingraham and his associates[5] treated forty-nine pregnant women. The women received 2,400,000 units of penicillin only, and of the thirty-seven infants born during the course of this study only one was syphilitic.

Goodwin and Moore[3] treated fifty-seven pregnant women with early syphilis with penicillin. Their recommended dose was 2,400,000. These women gave birth to sixty children, only one of which developed syphilis. Of the remaining fifty-nine, forty-two were followed up long enough to justify a negative diagnosis as regards congenital syphilis. These workers conclude that these results in the prevention of prenatal syphilis are superior to any heretofore attainable with any treatment, and recommend the abandonment of all other methods of treatment.

Platou[11] reported on penicillin in congenital syphilis at the Washington Penicillin Conference in Feruary, 1946. He analyzed the treatment of 191 cases and considered penicillin to be the best agent yet employed in the treatment of congenital syphilis. In his series, serological relapse was 3.6 per cent, and both clinical and serological relapse was 2.6 per cent. The dosage of penicillin for infants should range between a total of 100,000 to 400,000 units per kilogram of body weight. The larger dosage is favored.

Schoch and Alexander[13] in their report on the treatment of early syphilis with penicillin recommended a dosage of at least 2,400,000 units of penicillin and either 40 mg. of mapharsen daily for eight doses, or five injections of bismuth, 0.2 gm. each, on alternate days, or both. For reasons of safety they prefer the bismuth-penicillin combination.

In the reports on the treatment of neurosyphilis with penicillin, Stokes[14] recently came out with a very favorable report. He recommended a dose of at least 4,800,000 units.

O'Leary,[9] on the other hand, was not favorably impressed. He noted some good results in patients with the meningeal forms of the disease but stated that penicillin alone was not capable of controlling the parenchymatous forms of neurosyphilis.

Heller[4] in a recent article reported his conclusions in the evaluation of the treatment of 8,000 cases with various treatment schedules such as the five-day intravenous drip or the syringe method of multiple injections of mapharsen, and the use of penicillin in various doses either alone or with an arsenical or bismuth preparation, or both. He concluded that penicillin with bismuth gave the best results. No deaths were observed when penicillin was used alone. When penicillin was combined with mapharsen and bismuth, there was a mortality of one in 4,312 cases, and with intensive arsenotherapy the mortality ranged from one per 149 cases with the five-day intravenous drip to one in 1,873 cases in those treated by multiple injections.

These mortality figures easily explain why penicillin alone, or with small doses of mapharsen and bismuth, has replaced all previous rapid treatment methods.

Cole[1] recently reported his experience in the treatment of syphilis in pregnancy and recommended a dose of 2,400,000 units or more.

Two of the most recent articles are those of Yampolsky and Heyman[15] and that of O'Leary.[10] Yampolsky and Heyman had good results with penicillin in infantile congenital and acquired syphilis. Their results were poor in interstitial keratitis as well as in juvenile paresis.

O'Leary gave a good review of present-day treatment with penicillin and concluded that it was very good in recent cases and in pregnancy. In latent syphilis it was not so brilliant, and in central nervous system syphilis it gave variable results. O'Leary prefers a schedule of mapharsen, penicillin (2,400,000 units) followed by ten bismuth injections.

The usual method of giving penicillin is an aqueous solution given intramuscularly every three hours for from seven and one-half to ten days. This is done to maintain a constant penicillin level in the blood. Various methods have been tried to give penicillin in a form that would allow slower absorption and less frequent injections. Romansky[12] offered a method using peanut oil and beeswax. He gave a single daily injection of 300,000 units of calcium penicillin in a mixture of peanut oil and beeswax for eight days. These cases were followed from three to six months, and satisfactory results were reported in fifty-eight of the sixty cases.

In a special Venereal Disease Bulletin of the City and County of San Francisco, a report was made of the daily injection of 300,000 units of penicillin in peanut oil and beeswax for a period of ten days. Ninety-eight cases were treated and observed for a period of from three to nine months. The failure rate was 4 per

cent. They recommend combining the use of penicillin in oil and wax with the use of the arsenicals and bismuth.

Leifer[6] treated 200 cases of syphilis in various stages with penicillin, 300,000 units in peanut oil and wax daily for eight days. One hundred sixty-five cases were followed. In seventy-three cases of sero-negative primary syphilis he had two clinical relapses, and the final Wassermann tests showed fifty negative, four doubtful and two positive reactions. In sixty-nine cases of sero-positive primary syphilis he had three clinical relapses, and the final Wassermann tests showed thirty-one negative, four doubtful, and eighteen positive. In fifty-eight cases of secondary syphilis he had one clinical relapse, and the final Wassermann tests showed sixteen negative, six doubtful, and twenty-eight positive. He followed them for from two to nine months.

These conflicting reports on the oil and wax method show that this method is still in the experimental stage and is not as yet to be recommended for general use. The combined method of mapharsen, penicillin in oil and wax, and bismuth, may give much better results. This peanut oil and wax method has caused frequent reactions both local and general. Generalized reactions such as urticaria or Herxheimer reactions are not infrequent, while local lesions such as herpes simplex and painful nodules are quite common.

As soon as penicillin became available we began its use in the treatment of syphilis at the Minneapolis General Hospital. We started with a dose of 1,200,000 and soon after increased the dose to 2,400,000. Later, when reports of lessened activity of the penicillin began to come in, we increased the dose to 4,800,000 units. This small series, therefore, is a report of the treatment of syphilis with penicillin alone.

At present we are running another series of cases using mapharsen, penicillin and bismuth. This second series shows promise of giving better results and is the generally accepted method at present. As time goes on, and as reports from the various treatment centers come in, a method will be devised for a safe, rapid and satisfactory treatment of this disease.

Out of a total of 191 cases of syphilis treated with penicillin alone, 119 cases have been observed for at least three months minimum, and for as long as twenty-seven months maximum.

Of these there were twelve sero-negative primary cases. This particular group was observed for from three to sixteen months. Eight cases were followed six months or longer, and all twelve received a dosage of from 1,200,000 units in the first case, 2,400,000 in six cases, up to 5,000,000 in the others. All twelve cases have remained entirely free of any signs or symptoms, and all serologic tests have been negative during the period of observation.

Twenty-two cases of sero-positive primary syphilis were observed at least three months, and eleven cases in this group have been followed twelve months or longer. Fifteen, or 68.2 per cent were negative to all serologic tests at the time of their last examinations. Nine cases of the latter group were females, one of whom delivered a normal child twelve months following her treatment. Seven of the twenty-two cases, including the latter, received 1,200,000 units, seven received 2,400,000 units, and eight received 4,800,000 units total dosage. The six cases (27 per cent) showing strongly positive serologic tests at the time of their last visit were equally distributed between the above total dosages, so there did not seem to be any increased benefits or results derived from increasing the total dosage. One case showed only weakly positive serologic reactions to the more sensitive precipitation tests, and a negative reaction to the Kolmer Wassermann test after four months.

Thirty-one cases with secondary manifestations were followed for periods ranging from four to twenty-nine months. Eleven cases (35.5 per cent) at the time of their last visit still showed strongly positive serologic tests and were considered failures. Two of these were followed for four months, and the other four for sixteen months. Twenty cases (64.5 per cent) reversed to complete negativity and were considered cured.

Nine cases of early latent type of infection were followed for periods ranging from three to eighteen months. Four of these cases (44 per cent) showed negative serologic tests within three months of the time of treatment; five (55 per cent) remained positive and were considered failures.

Thirty-two cases of the late latent type were followed for periods ranging from six months to seventeen months. Only three cases in this group (9 per cent) showed completely negative reactions following treatment and were considered cures. Twenty-nine (91 per cent) remained positive and were considered failures. All of the twenty-nine cases received at least 2,400,000 units, nine cases getting a total of 4,800,000 units.

Twenty-two cases with central nervous system involvement, as evidenced by positive spinal fluid findings, were treated. Nine cases were followed for periods ranging from five to seventeen months. Of these nine cases, two became entirely free of any positive findings. In the other seven there was some decrease in the protein content, and the number of cells found on examination of the spinal fluid. The serologic tests remained positive, however, and in spite of the fact that they showed general improvement physically and an increased feeling of well-being they were considered failures.

There were only two cases of congenital syphilis treated. One infant was first seen at four and one-half months and was given 2,400,000 units of penicillin. This child's blood was completely negative two and one-half months later. The second case, a male infant one year old, was given 1,400,000 units of penicillin and was lost after two months follow-up, at which time the blood serologic tests were still strongly positive.

Two cases of aneurism were treated with penicillin, beginning with 10,000 units every three hours for one day, then 20,000, and slowly up to 50,000 units every three hours. A total of 5,000,000 units was given. One patient did very well and is greatly improved, but the second man died in about three weeks from laryngeal compression after the aneurism increased greatly in size. This unhappy ending should cause us to be very careful in the treatment of cardiovascular syphilis. A

preliminary course of bismuth should be given in such cases.

Summary of Cases Treated with Penicillin Alone

In sero-negative primary syphilis all of our cases have remained negative.

In sero-positive primary syphilis only 68.2 per cent became negative, 27 per cent were still positive, and 4.4 per cent were weakly positive.

In secondary syphilis 64.5 per cent became negative and 35.5 per cent were positive.

In early latent syphilis 45 per cent became negative and 55 per cent were positive.

In late latent syphilis only 9 per cent became negative and 91 per cent remained positive.

In a small series of central nervous system syphilis, 22 per cent became negative and the other cases had some changes for the better in the spinal findings and in physical well-being.

Comment

1. Penicillin is a valuable addition to our therapy of syphilis.
2. The earlier it is given the better are the results.
3. A schedule of mapharsen, penicillin and bismuth has replaced all other rapid treatment methods for early syphilis.
4. In the treatment of latent syphilis the same schedule can be used, and it is possible that the results may be as good as the older method of continuous arsenicals and bismuth given over many months.
5. Malaria plus penicillin is the treatment of choice in central nervous system syphilis.
6. In the treatment of cardiovascular or visceral syphilis, a course of bismuth and potassium iodide should precede the administration of penicillin.
7. The results of penicillin therapy in sero-negative primary syphilis and in syphilis in pregnancy are especially brilliant, and these results alone are enough to give penicillin a high place in the treatment of this disease.

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Discussion

DR. P. A. O'LEARY, Rochester, Minn.: I enjoyed Doctor Sweitzer's conservatism in regard to penicillin in the treatment of syphilis, because I, too, have that same attitude. During the early period of our experience with penicillin I had the opportunity of observing a large group of patients with acute syphilis at the Chicago Intensive Treatment Center, and it was apparent early in our experience that penicillin, in small doses or in very large doses, would not cure all patients with acute syphilis. It was likewise evident that the earlier treatment was started in the course of the disease, the better were the results; in other words, in the sero-negative chancre phase of syphilis, before the Wassermann had become positive, successful results approximated 95 per cent, whereas in the individual with the late recurrent lesions of the skin and mucous membranes who had had his disease for fifteen or eighteen months, the incidence of failure approximated 40 per cent. When all of the good systems for the treatment of early syphilis are surveyed, it is apparent that the "cure rate" approximates some 80 per cent under all of the various programs. In other words, it would appear that approximately 80 per cent of the patients with early syphilis respond satisfactorily to most any good system of treatment for syphilis, while the remaining 20 per cent are those who have been resistant heretofore to all forms of treatment and are, in all probability, the individuals who eventually develop the late and serious complications of the disease. It has been my experience that many million units of penicillin do not control the disease in individuals who are in this 20 per cent group, so that I felt it necessary to supplement the penicillin with the addition of mapharsen and bismuth. Likewise, it does not seem advisable to regiment the treatment of patients with early syphilis. One should not treat all patients by the same procedure and expect to derive 100 per cent cure any more than one expects that patients with other infectious diseases will all respond to the same doses of any given drug. It has been my practice to give a second and occasionally a third course of mapharsen-penicillin-bismuth when it is evident that the first course is failing to produce satisfactory results.

Our practice is to give four injections of mapharsen on four successive days, 0.05 gm. each, followed by 3,000,000 units of penicillin, in turn followed by fifteen injections of bismuth. If the results are not satisfactory after a period of four to six months, the course is repeated.

One of the many striking values of penicillin has been the reduction in the incidence of asymptomatic neurosyphilis. Under the old chemotherapeutic procedures, approximately 15 per cent of the patients with the early forms of the disease are found to have positive spinal fluid tests. Under the pencillin regime, we are finding that approximately 2 per cent have evidence of activity in the spinal fluid. In a decade or two from now, this finding might well be substantiated by a reduction in the incidence of clinical neurosyphilis. Although the cure rate at the present time is quite comparable to that of the chemotherapeutic procedures, penicillin does offer the opportunity of permitting more patients to complete the course of treatment, so that the future likewise suggests that although the percentage of cure rate is similar to the arsenic-bismuth combinations, the all-over picture will show, however, a higher incidence of cure because more patients will finish the prescribed treatment.

Penicillin in a combination of beeswax and peanut oil permits of giving one injection a day instead of one every three hours, and in a year from now may further simplify the treatment schemes of early syhpilis. The course of treatment of early syphilis with mapharsen-penicillin-bismuth is shorter, is less expensive, offers decidedly fewer complications and gives a satisfactory result in about 60 per cent of the patients. When taken

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Minneapolis Surgical Society

Stated Meeting Held March 6, 1947

LUMBAR RETROPERITONEAL GANGLIONEUROMA

Review of Literature and Report of Case in Which the Tumor was Removed Surgically

LAWRENCE M. LARSON, M.D., Ph.D. (Surg.)

Summary*

A case of retroperitoneal ganglioneuroma of the left lumbar sympathetic system is reported in a twenty-eighty-year-old white woman. This tumor had produced definite severe pain locally on the left side and possibly on the right side of the abdomen and lower extremity. Complete relief of these symptoms followed its surgical removal. An interesting postoperative sequela of permanent increase in temperature of the lower extremity on the same side is noted, similar to that occurring with sympathectomy for hypertension.

A review of the literature has been made, and a description of the symptoms, findings and pathologic nature of this tumor are recorded.

Microscopically, these tumors are composed of nerve and connective tissue elements with bundles of nerve fibers in longtitudinal and transverse sections surrounded by a connective tissue stroma. Ganglion cells in various degrees of maturity may be present singly or in groups, and are usually associated with nerve processes. The cytoplasm of these cells is granular, their nuclei may be single or multiple, and the stroma may be of varying degrees of denseness.

Clinically and grossly, these tumors are indistinguishable from neuroma, fibroma, sarcoma, and so forth, and it is only by microscopic examination that the true nature of the tumor can be made out. They are no doubt congenital in origin and probably arise from cell nests displaced in embryonic life. They rarely recur when completely removed and practically never metastasize.

The rarity of this lesion is indicated by the fact that there are probably less than fifty similar cases recorded in the literature and there are no similar tumors recorded in the files of the Department of Pathology, University of Minnesota.

*Complete paper will appear in a later issue.

CONGENITAL DIAPHRAGM OF THE DUODENUM

With Case Report and Preoperative X-Ray Studies

WALLACE I. NELSON, M.D., F.A.C.S.

Summary*

Congenital diaphragm of the duodenum is a developmental anomaly in which a membrane, formed by an infolding of the mucosa and submucosa, extends across the lumen of the duodenum. The diaphragm may be complete or it may present an aperture.

A review of the literature reveals thirty-five reported cases of congenital duodenal diaphragm. Of the thirty-five cases reported in the literature, twelve patients were operated upon. *In only six cases of the entire series was the true nature of the lesion discovered during life.*

The author discusses the embryology, and anatomy, including the relationship to the bile and pancreatic ducts and clinical manifestations of this anomaly. The most important factor in the diagnosis is the ability to recognize the presence of the obstruction when it exists. The differential diagnosis between pyloric stenosis and various extrinsic and intrinsic causes of obstruction is discussed.

A case is presented of a twenty-six-year-old woman in whom preoperative x-rays demonstrated such anomaly; this was proved by operation. No other cases have been found in the literature in which the diagnosis was made by x-ray before operation.

Dilatation of the duodenum proximal to the lesion and the presence of a ring of constriction visible at operation at the level of the diphragm are two signs which should lead the surgeon to search for a diaphragm. Mobilization of the duodenum, duodenotomy, and direct removal of the diaphragm are the surgical procedures advocated in preference to short-circuiting operations.

*Complete paper, fully illustrated, will appear in a later issue.

TUBERCULOSIS IN OLDER MEN

So much emphasis has been placed on tuberculosis as a serious disease of girls and young women that its greater havoc among men has not received the attention that it deserves. As a result of the more rapid decline of tuberculosis in females in this country there are today 156 deaths among males to every 100 deaths in females and only at ages ten to thirty is the mortality higher in females. Tuberculosis is increasingly becoming a disease of older, occupied men.—HENRY D. CHADWICK, M.D., and ALTON S. POPE, M.D., The Modern Attack on Tuberculosis, The Commonwealth Fund, Revised, 1946.

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all together it is economically and therapeutically a great improvement over the older systems of treatment.

DR. GEORGE FAHR, Minneapolis: I shall confine myself to a discussion of the treatment of syphilitic aortitis with penicillin. This discussion will be based upon my observations of the two cases of luetic aortitis treated by Dr. Sweitzer's staff at the Minneapolis General Hospital, as well as on my experience in treating luetic aortitis, including autopsy observations of patients who have died following treatment with salvarsan and neo-salvarsan. My experience in this field goes back to the pre-salvarsan days and for this very reason is of some value, because experience gleaned in treating luetic aortitis and syhilitic gummas in pre-salvarsan days is very helpful in developing a rational therapy with the more effective drugs available since the invention of "606."

The preceding speakers have indicated that penicillin is a very powerful anti-spirocheticidal drug. The use of strong anti-spirocheticidal drugs can lead to the so-called Herxheimer reaction. In luetic aortitis with a moderately large to large aneurysm, the giving of a strong anti-spirocheticidal agent without the necessary preparation may lead to hemorrhage. This has been demonstrated many times in the experience of the past years, especially when salvarsan was given without proper preparation in the early years of salvarsan and neo-salvarsan use in the treatment of luetic aortitis. When there is swelling about the mouths of the coronary arteries in luetic aortitis, the giving of a strong anti-spirocheticidal agent without previous preparation may lead to swelling and edema in this area, leading to partial or almost complete closure of the mouth of the coronary artery with angina pectoris-like pains and frequently sudden death. Where there is aortic insufficiency in luetic aortitis, the exhibition of a strong anti-syphilitic drug may lead to swelling of the commissures of the aortic valves and increased degree of aortic insufficiency and, if left heart failure is already present to some degree, it may lead to an increased degree of left heart failure with congestion and edema of the lungs, and sometimes to heart failure and death.

The first case of luetic aortitis treated by Dr. Sweitzer's assistants was given penicillin without previous preparation. The patient had a large aneurysm of the ascending and innominate arteries. Within ten days after starting the penicillin, at which time 3,400,000 units had been given, the patient developed a marked enlargement of the aneurysm with hemorrhage into the surrounding tissues and was dead within twelve days. The second case of luetic aortitis treated with penicillin developed severe angina pectoris twenty-four hours after being given the first dose of penicillin. This patient luckily did not die but recovered in a few days and is living at the present time.

When one has a patient with luetic aortitis and wishes to treat him with a strong anti-spirocheticidal drug, it is necessary to begin treatment, in my estimation, with the giving of potassium iodide in large doses for about three weeks. Then a course of bismuth injections should be given bi-weekly, extending over a period of six or eight weeks. After this one can begin cautiously with neo-salvarsan, starting in with 0.15 gm. per injection the first week and reaching 0.45 gm. in four weeks. After giving 0.45 gm. for two weeks, the danger of a Herxheimer reaction is over with, and I can see no objection then to giving neo-salvarsan in large doses (at the rate of 0.45 gm. a week). I am inclined to believe that in the future we will use penicillin in the treatment of luetic aortitis with good results and a great deal of gratification to the internist. In my opinion, the internist who is at the same time a competent cardiologist should treat luetic aortitis, because one must not only treat the syphilis but one must also treat the heart.

The meeting adjourned.

A. E. CARDLE, M.D., *Secretary*

CLINICAL-PATHOLOGICAL CONFERENCE

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basis of pulmonary emphysema although it is possible that mechanical factors associated with the deformity may be contributing factors. In all these cases of kyphoscoliosis, there is usually a rather advanced degree of emphysema.

There is little literature on the subject of cor pulmonale following thoracoplasties for tuberculosis. In the few cases reported, it would again appear that the emphysema of the opposite lung would be the main underlying factor in the development of the cor pulmonale. The fibrosis associated with the tuberculosis would be a contributing one. Dr. Kinsella[7] states that in twenty-five pneumonectomies performed by him, none of these so far shows any signs of right ventricular hypertrophy or dilatation. Two of the twenty-five cases have been followed as long as ten years. Parker[8] in a study of thirty-two cases of essential pulmonary emphysema found enlargement of the right ventricle in 7[illegible] per cent of the cases and congestive right heart failure in 44 per cent of the cases. He concluded that the arteriosclerotic changes found in the pulmonary vessels in these cases were secondary to the pulmonary hypertension produced by the emphysema. In pulmonary tuberculosis, silicosis, chronic bronchiectasis, bronchial asthma, and idiopathic pulmonary fibrosis, pulmonary emphysema is almost universally present. When cor pulmonale develops in these cases, it is generally believed that the pulmonary hypertension is the result of the emphysema.

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DEARTH OF NURSES

The American Hospital Association has launched an intensified student nurse enrollment program on a nation-wide scale. The campaign will involve the expenditure of thousands of dollars and will utilize newspaper advertisements, magazine articles, the radio, and cards in street cars, buses and office windows. The various national organizations are invited to co-operate.

Minnesota schools of nursing will offer opportunities for the training of a thousand young women, next fall, according to Miss Thelma Dodds, president of the Minnesota Nurses Association.

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B. F. Pearson, M.D. ..... Shakopee

SHERBURNE COUNTY
A. B. Roehlke, M.D. ..... Elk River
E. F. Clothier, M.D. ..... Elk River
Gordon H. Tesch, M.D. ..... Elk River

SIBLEY COUNTY
Rolf Hovde, M.D. ..... Winthrop
Thomas Martin, M.D. ..... Arlington
D. C. Olson, M.D. ..... Gaylord

STEARNS COUNTY
A. H. Zachman, M.D. ..... Melrose
C. F. Brigham, M.D. ..... St. Cloud
W. T. Wenner, M.D. ..... St. Cloud

STEELE COUNTY
D. E. Morehead, M.D. ..... Owatonna
L. V. Berghs, M.D. ..... Owatonna
D. H. Dewey, M.D. ..... Owatonna

STEVENS COUNTY
E. T. Fitzgerald, M.D. ..... Morris
M. L. Ransom, M.D. ..... Hancock

SWIFT COUNTY
Hans Johnson, M.D. ..... Kerkhoven
C. L. Scofield, M.D. ..... Benson
E. J. Kaufman, M.D. ..... Appleton

TODD COUNTY
M. E. Mosby, M.D. ..... Long Prairie
J. M. Cook, M.D. ..... Staples
E. J. Simons, M.D. ..... Swanville

TRAVERSE COUNTY
†N. F. Doleman, M.D. ..... Tintah
A. L. Lindberg, M.D. ..... Wheaton

WABASHA COUNTY
T. G. Wellman, M.D. ..... Lake City
B. J. Bouquet, M.D. ..... Wabasha
E. W. Ellis, M.D. ..... Elgin

WADENA COUNTY
L. T. Davis, M.D. ..... Wadena
H. G. Bosland, M.D. ..... Verndale
C. H. Pierce, M.D. ..... Wadena

WASECA COUNTY
O. J. Swenson, M.D. ..... Waseca
H. M. McIntire, M.D. ..... Waseca
B. J. Gallagher, M.D. ..... Waseca

WASHINGTON COUNTY
J. W. Stuhr, M.D. ..... Stillwater
E. R. Samson, M.D. ..... Stillwater

WATONWAN COUNTY
O. B. Bergman, M.D. ..... St. James
F. L. Bregel, M.D. ..... St. James

WILKIN COUNTY
W. E. Wray, M.D. ..... Campbell

WINONA COUNTY
Herbert Heise, M.D. ..... Winona

WRIGHT COUNTY
T. J. Catlin, M.D. ..... Buffalo
L. H. Bendix, M.D. ..... Annandale
R. D. Thielen, M.D. ..... St. Michael

YELLOW MEDICINE COUNTY
E. R. Hudec, M.D. ..... Echo
P. G. Schmidt, Jr., M.D. ..... Granite Falls
(No committees have been appointed in the following counties: Cook and Lake of the Woods.)

†Deceased.

Woman's Auxiliary to the Minnesota State Medical Association

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DISTRICT NO. 1

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Counties—Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona.

DISTRICT NO. 2

L. L. Sogge, M.D. ..... Windom
Counties—Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Pipestone, Rock, Watonwan.

DISTRICT NO. 3

†C. M. Johnson, M.D. ..... Dawson
Counties—Big Stone, Brown, Chippewa, Kandiyohi, Lac Qui Parle, Lincoln, Lyon, Meeker, Pope, Redwood, Stevens, Swift, Traverse, Yellow Medicine.

DISTRICT NO. 4

A. E. Sohmer M.D. ..... Mankato
Counties—Blue Earth, Carver, Le Sueur, McLeod, Nicollet, Renville, Scott, Sibley, Waseca.

†Deceased.

DISTRICT NO. 5

E. M. Hammes, M.D. ..... Saint Paul
Counties—Anoka, Chisago, Dakota, Isanti, Kanabec, Mille Lacs, Pine, Ramsey, Sherburne, Washington.

DISTRICT NO. 6

A. E. Cardle, M.D. ..... Minneapolis
Counties—Hennepin, Wright.

DISTRICT NO. 7

W. W. Will, M.D. ..... Bertha
Counties—Aitkin, Beltrami, Benton, Cass, Clearwater, Crow Wing, Hubbard, Koochiching, Morrison, Stearns, Todd, Wadena.

DISTRICT NO. 8

W. L. Burnap, M.D. ..... Fergus Falls
Counties—Becker, Clay, Douglas, Grant, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Ottertail, Pennington, Polk, Red Lake, Roseau, Wilkin.

DISTRICT NO. 9

F. J. Elias, M.D. ..... Duluth
Counties—Carlton, Cook, Itasca, Lake, St. Louis.

County Society Roster

Key to Symbols: *Deceased; † Affiliate, Associate or Life Member; ‡ In Service; §Wife is Member of Woman's Auxiliary.

BLUE EARTH COUNTY MEDICAL SOCIETY

Regular meetings, last Monday of each month
Annual meeting in May
Number of Members: 37

President
§Hoeper, P. G.....Mankato

Secretary
§Vezina, J. C.....Mapleton

§Andrews, R. N.....Mankato
Batdorf, B. N.....Good Thunder
§Butzer, J. A.....Mankato
§†Dahl, G. A.....Mankato
§Denman, A. V.....Mankato
†Edwards, R. T.....Big Fork, Mont.
§Franchere, F. W.....Lake Crystal
§Fugiina, G. R.....Mankato
§Haes, J. E.....Mankato
Hankerson, R. G.....Minnesota Lake
§Hassett, R. G.....Mankato
§Hoeper, P. G.....Mankato
§Howard, E. G.....Mapleton
§Howard, M. I.....Mankato
§Huffington, H. L.....Mankato
§Jones, O. H.....Mankato
§Juliar, R. O.....St. Clair
§Kaufman, W. B.....Mankato
§Kearney, R. W.....Mankato
§Kemp, A. F.....Mankato
§Koenigsberger, Chas.....Mankato
Liedloff, A. G. .....Mankato
Luck, Hilda .....Mankato
*Macbeth, J. L.....St. Clair
§Mickelson, J. C.....Mankato
§Miller, V. L.....Mankato
§Morgan, H. O.....Amboy
§Penn, G. E.....Mankato
§Samuelson, L. G.....Mankato
§Schlesselman, J. T.....Mankato
Schmidt, P. A. .....Good Thunder
§Schmitz, A. A.....Mankato
§Sohmer, A. E.....Mankato
§Stillwell, W. C.....Mankato
§Troost, H. B.....Mankato
§Vezina, J. C.....Mapleton
§Wentworth, A. J.....Mankato
Williams, H. O.....Lake Crystal

BLUE EARTH VALLEY MEDICAL SOCIETY

Faribault and Martin Counties
Regular meetings, first Thursday of month
Annual meeting, first Thursday in November
Number of Members: 30

President
Thayer, E. A.....Fairmont

Secretary
Boysen, Herbert.....Madelia

Armstrong, R. S.....Winnebago
Bailey, R. B.....Fairmont
Barr, W. H.....Wells
Boysen, Herbert.....Madelia
Burmeister, R. O.....Welcome
Chambers, W. C.....Blue Earth
Cooper, M.D.....Winnebago
Drexler, G. W.....Blue Earth
Gardner, V. H.....Fairmont
Grogan, J. M.....Ceylon
Hanson, Lewis.....Frost
Heimark, J. J.....Fairmont
†Holm, P. F.....Wells
Hunt, R. C.....Fairmont
Hunt, R. S.....Fairmont
Hunte, A. F.....California
Krause, C. W.....Fairmont
McGroarty, J. J.....Easton
Medlin, C. F.....Truman
Mills, J. L.....Winnebago
Parsons, R. L.....Monterey
Rowe, W. H.....Fairmont
Russ, H. H.....Blue Earth
Snyder, C. D.....Kiester
Sommer, A. W.....Elmore
Thayer, E. A.....Fairmont
Vaughan, V. M.....Truman
Virnig, M. P.....Wells
Wilson, C. E.....Blue Earth
§Zemke, E. E.....Fairmont

CAMP RELEASE MEDICAL SOCIETY

Chippewa, Lac Qui Parle and Yellow Medicine Counties
Regular meetings monthly
Annual meeting, December
Number of Members: 27

President
Owens, W. A.....Montevideo

Secretary
§Schmidt, P. G., Jr.....Granite Falls

§Bergh, L. N. .....Montevideo
Boody, G. J., Jr.....Dawson
Burns, F. M.....Milan
Burns, M. A.....Milan
Guilbert, G. D. .....Wood, Wis.
§Hauge, M. I.....Clarkfield
Holmberg, L. J. .....Canby
Hudec, E. R.....Echo
*Johnson, C. M.....Dawson
§Johnson, V. M.....Dawson
†Jordan, Kathleen .....Granite Falls
Jordan, L. S. .....Granite Falls
§Kath, R. H.....Wood Lake
Kaufman, W. C.....Appleton
Lee, W. N.....Madison
Lima, Ludvig.....Montevideo
Lima, L. R., Jr. .....Montevideo
Lundell, C. L.....Granite Falls
§Nelson, M. S.....Granite Falls
Owens, W. A.....Montevideo
Pertl, A. L.....Canby
§Roust, H. A.....Montevideo
Schmidt, P. G., Jr.....Granite Falls
§Smith, L. G.....Montevideo
§Westby, Magnus.....Madison
Westby, Nels.....Madison

CLAY-BECKER COUNTY MEDICAL SOCIETY

Regular meetings quarterly
Annual meeting, December
Number of Members: 22

President
Rutledge, L. H.....Detroit Lakes

Secretary
Hendrickson, R. R.....Lake Park

†Aborn, W. H. .....Hawley
Bottolfson, B. T.....Moorhead
Carman, J. E.....Detroit Lakes
Duncan, J. W.....Moorhead
Ellington, A. R.....Detroit Lakes
Hagen, O. J.....Moorhead
Haight, G. G.....Audubon
Hendrickson, R. R.....Lake Park
Humphrey, E. W.....Moorhead
Ingebrightson, E. K. G.....Moorhead
Johnson, Olga H.....Moorhead
Larson, Arnold.....Detroit Lakes
§Moberg, C. W.....Detroit Lakes
§Oliver, James.....Moorhead
Olsen, Gertrude E.....Georgetown
Otto, H. C.....Frazee
Rutledge, L. H.....Detroit Lakes
Seitz, S. B.....Barnesville
Shaw, H. A.....Minneapolis
Simison, Carl.....Barnesville
Thysell, F. A.....Moorhead
Thysell, V. D.....Hawley

DAKOTA COUNTY MEDICAL SOCIETY

Number of Members: 8

President
Emond, A. J.....Farmington

Secretary
Peck, L. R.....Hastings

Burns, L. S.....So. St. Paul
Emond, A. J.....Farmington
Emond, J. S.....Farmington
Field, A. H.....Farmington
Peck, L. D.....Hastings
Peck, L. R.....Hastings
Sanford, J. A.....Farmington
Walter, G. F.....Farmington

EAST CENTRAL MINNESOTA MEDICAL SOCIETY

Anoka, Chisago, Isanti, Kanabec, Mille Lacs, Pine and Sherburne Counties

Regular meetings, February, April, June, August, October, December
Annual meeting, December
Number of Members: 37

President
Gully, R. J. ..... Cambridge

Secretary
Roehlke, A. B. ..... Elk River

Arends, A. L. ..... Jamestown, N. D.
§Albrecht, H. H. ..... Lindstrom
§Blomberg, W. R. ..... Princeton
Bossert, C. S. ..... Mora
Brownstone, Manuel ..... Sandstone
§Bunker, B. W. ..... Anoka
Clothier, E. F. ..... Elk River
Crabtree, J. C. ..... Princeton
†Dedolph, T. H. ..... Minneapolis
Dredge, H. P. ..... Sandstone
§Gully, R. J. ..... Cambridge
§Halpin, J. E. ..... Rush City
§Hedenstrom, L. H. ..... Cambridge
Holmes, A. E. ..... Rush City
Kapsner, Carl ..... Princeton
§Kelsey, C. G. ..... Hinckley
Larson, Ralph ..... Anoka
§Miller, E. W. ..... Anoka
§Mork, A. H. ..... Anoka
§Mork, F. E. ..... Anoka
§Nordman, W. F. ..... Mora
Nygren, W. T. ..... Braham
§O'Hanlon, J. A. ..... Lindstrom
§Petersen, P. C. ..... Mora
§Peterson, C. A. ..... Chisago City
Riegel, G. S. ..... Taylors Falls
§Roehlke, A. B. ..... Elk River
Sather, R. N. ..... Mora
Schlesselman, George ..... Anoka
§Sherman, H. T. ..... Cambridge
Spurzem, R. J. ..... Anoka
Stephan, E. L. ..... Hinckley
§Stratte, A. K. ..... Pine City
§Swensen, R. G. ..... North Branch
§Tesch, G. H. ..... Elk River
Vik, Melvin ..... Onamia
§Whitney, R. A. ..... Cambridge

FREEBORN COUNTY MEDICAL SOCIETY

Regular meetings quarterly
Annual meeting, December
Number of Members: 26

President
§Gamble, P. M. ..... Albert Lea

Secretary
Person, J. P. ..... Alden

§Barr, L. C. ..... Albert Lea
§Branham, D. S. ..... Albert Lea
§Butturff, C. R. ..... Freeborn
Calhoun, F. W. ..... Albert Lea
§Demo, Robert A. ..... Albert Lea
Donovan, D. L. ..... Albert Lea
§Folken, F. G. ..... Albert Lea
§Freligh, W. P. ..... Albert Lea
Gamble, J. W. ..... Albert Lea
§Gamble, P. M. ..... Albert Lea
Gullixson, A. ..... Albert Lea
Hansen, T. M. ..... Alden
Kamp, B. A. ..... Albert Lea
Leopard, B. A. ..... Albert Lea
§Neel, H. B. ..... Albert Lea
Nelson, Clayton E. J. ..... Albert Lea
§Nesheim, M. O. ..... Emmons
Palmer, C. F. ..... Albert Lea
Palmer, W. L. ..... Albert Lea
Palmerton, E. S. ..... Albert Lea
§Person, J. P. ..... Alden
§Prins, L. R. ..... Albert Lea
Schultz, J. A. ..... Albert Lea
§Swanson, R. R. ..... Albert Lea
Wenzel, R. E. ..... Albert Lea
§Whitson, S. A. ..... Albert Lea

GOODHUE COUNTY MEDICAL SOCIETY

Regular meetings, none
Annual meeting, December
Number of Members: 24

President
§Hartnagel, G. F. ..... Red Wing

Secretary
§Brusegard, J. F. ..... Red Wing

Aanes, A. M. ..... Red Wing
Akins, W. M. ..... Red Wing
Anderson, S. H. ..... Red Wing
Brusegard, J. F. ..... Red Wing
§Claydon, H. F. ..... Red Wing
§†Claydon, L. E. ..... Red Wing
§Flom, M. G. ..... Zumbrota
§Graves, R. B. ..... Red Wing
§Hartnagel, G. F. ..... Red Wing
§Hedin, R. F. ..... Red Wing
Johnson, A. E. ..... Red Wing
†Jones, A. W. ..... Red Wing
§Juers, E. H. ..... Red Wing
§Kimmel, G. C. ..... Red Wing
Larson, Ralph H. ..... Cannon Falls
§Liffrig, W. W. ..... Red Wing
Mack, J. J. ..... Little Rock, Ark.
McGuigan, H. T. ..... Red Wing
Odessky, Louis ..... St. Paul
§Sherman, R. V. ..... Red Wing
†Smith, M. W. ..... Red Wing
§Steffens, L. A. ..... Red Wing
§Weir, J. R. ..... Goodhue
Williams, M. R. ..... Cannon Falls

HENNEPIN COUNTY MEDICAL SOCIETY

Regular meetings, first Monday each month, October through May
Annual meeting, October
Number of Members: 771

President
Boies, L. R. ..... Minneapolis

Secretary
Jones, W. R. ..... Minneapolis

Executive Secretary
Mr. J. H. Baker ..... Minneapolis

Aagaard, G. N., Jr. ..... Minneapolis
§Abramson, Milton ..... Minneapolis
Adkins, C. D. ..... Minneapolis
Ahern, E. E. ..... Minneapolis
Alexander, H. A. ..... Minneapolis
Alger, E. W. ..... Minneapolis
§Aling, C. A. ..... Minneapolis
†§Aling, C. P. ..... Minneapolis
§†Allen, H. W. ..... Minneapolis
§Altnow, H. O. ..... Minneapolis
§Andersen, A. G. ..... Minneapolis
§Andersen, S. C. ..... Minneapolis
§Anderson, D. D. ..... Minneapolis
Anderson, D. P. ..... Minneapolis
§Anderson, E. D. ..... Minneapolis
§Anderson, E. R. ..... Minneapolis
§Anderson, F. J. ..... Minneapolis
§Anderson, J. K. ..... Minneapolis
§Anderson, K. W. ..... Minneapolis
§Anderson, U. S. ..... Minneapolis
Anderson, W. T. ..... Minneapolis
Andreassen, E. C. ..... Minneapolis
Andresen, K. D. ..... Minneapolis
§Andrews, R. S. ..... Minneapolis
§Arey, S. L. ..... Minneapolis
§Arlander, C. E. ..... Minneapolis
§Arling, L. S. ..... Minneapolis
Arnold, Ann W. ..... Minneapolis
Arnold, D. C. ..... Minneapolis
§Arvidson, C. G. ..... Minneapolis
§Aune, Martin ..... Minneapolis
†Aurand, W. H. ..... Minneapolis
Baird, J. W. ..... Minneapolis
§Baken, M. P. ..... Minneapolis
Baker, A. B. ..... Minneapolis
Baker, A. T. ..... Minneapolis
§Baker, E. L. ..... Minneapolis
Baker, Looe ..... Minneapolis
§Balkin, S. G. ..... Minneapolis
Bank, H. E. ..... Minneapolis
†Barber, J. P. ..... Minneapolis
Barr, R. N. ..... Minneapolis
§Barron, Moses ..... Minneapolis
Bateman, Olive A. L. ..... Rochester
§Baxter, S. H. ..... Minneapolis
§Bayard, H. F. ..... Minneapolis
§Beach, Northrop ..... Minneapolis
†Beard, A. H. ..... Minneapolis
§†Beckman, W. G. ..... San Francisco, Calif.
§Bedford, E. W. ..... Minneapolis
Beiswanger, R. H. ..... Minneapolis
†Bell, E. T. ..... Minneapolis
Belzer, M. S. ..... Minneapolis
Benesh, L. A. ..... Minneapolis
Benesh, N. G. ..... Minneapolis
§Benjamin, A. E. ..... Minneapolis
§Benjamin, E. G. ..... Minneapolis
§Benjamin, H. G. ..... Minneapolis
§Benn, F. G. ..... Minneapolis
Berger, A. G. ..... Minneapolis
Bergh, G. S. ..... Minneapolis
Bergh, Solveig M. ..... Minneapolis
§Berkwitz, N. J. ..... Minneapolis
Berman, Reuben ..... Minneapolis
§Bessesen, A. N., Jr. ..... Minneapolis
§Bessesen, D. H. ..... Minneapolis
Bessesen, W. A. ..... Minneapolis
Bieter, R. N. ..... Minneapolis
‡Blake, Alan ..... Hopkins
§Blake, J. A. ..... Hopkins
§Blake, James ..... Hopkins
†Blake, P. S. ..... Minneapolis
Bloedel, T. J. ..... Osseo
Blumenthal, J. S. ..... Minneapolis
Bockman, M. W. H. ..... Minneapolis
§Boehrer, J. J. ..... Minneapolis
§Boies, L. R. ..... Minneapolis
†Booth, A. E. ..... Minneapolis
§Boreen, C. A. ..... Minneapolis
Borgeson, E. J. ..... Minneapolis
§Borman, C. N. ..... Minneapolis
Borowicz, L. A. ..... Minneapolis
§Bowers, G. G. ..... Minneapolis
Boynton, Ruth E. ..... Minneapolis
§Bratrud, A. F. ..... Minneapolis
§Brekke, H. J. ..... Minneapolis
Brill, Alice K. ..... Minneapolis
Brooks, C. N. ..... Minneapolis
†Brown, E. D. ..... Paynesville
Brown, F. J. ..... Minneapolis
Brown, J. R. ..... Minneapolis
†Brown, S. P. ..... Minneapolis
Brown, W. D. ..... Minneapolis
Brutsch, G. C. ..... Minneapolis
§Buchstein, H. F. ..... Minneapolis
Buirge, Raymond ..... Minneapolis
Bulkley, Kenneth ..... Minneapolis
Bushard, W. J. ..... Minneapolis
§Buzzelle, L. K. ..... Minneapolis
§Cable, M. L. ..... Minneapolis
§Cabot, C. M. ..... Minneapolis
§Cabot, V. S. ..... Minneapolis
Cady, L. H. ..... Minneapolis
Callerstrom, G. W. ..... Minneapolis
Cameron, Isabell L. ..... Minneapolis
Camp, W. E. ..... Minneapolis
Campbell, L. M. ..... Minneapolis
§Campbell, O. J. ..... Minneapolis
§Cardle, A. E. ..... Minneapolis
§Carey, J. B. ..... Minneapolis
§Carlson, Lawrence ..... Minneapolis
§Carlson, L. T. ..... Minneapolis

§Caron, R. P. ..... Minneapolis
Caspers, C. G. ..... Minneapolis
§Cavanor, F. T. ..... Minneapolis
Ceder, E. T. ..... Minneapolis
Challman, S. A. ..... Minneapolis
Chesley, A. J. ..... Minneapolis
§Christenson, G. R. ..... Minneapolis
§Christianson, H. W. ..... Minneapolis
*†Clark, H. S. ..... Minneapolis
Clarke, E. K. ..... Minneapolis
§Clay, L. B. ..... Minneapolis
Cochrane, R. F. ..... Minneapolis
Cohen, B. A. ..... Minneapolis
§Cohen, S. S. ..... Oak Terrace
Colp, E. A. ..... Robbinsdale
Cooper, J. P. ..... Wayzata
Condit, W. H. ..... Minneapolis
§Corbett, J. F. ..... Minneapolis
Corniea, A. D. ..... Minneapolis
§Correa, D. H. ..... Minneapolis
§Coulter, E. B. ..... Minneapolis
Cowan, D. W. ..... Minneapolis
§Cranmer, R. R. ..... Minneapolis
†Cranston, R. W. ..... Minneapolis
§Creevy, C. D. ..... Minneapolis
§Creighton, R. H. ..... Minneapolis
§Culligan, L. C. ..... Minneapolis
Cumming, H. A. ..... Minneapolis
Cutts, George ..... Minneapolis
§Dady, E. E. ..... Minneapolis
Dahl, E. O. ..... Minneapolis
§Dahl, J. A. ..... Minneapolis
§Daniel, D. H. ..... Minneapolis
§Davis, J. C. ..... Minneapolis
Davis, W. I. ..... Mound
§del Plaine, C. W. ..... Minneapolis
Dennis, Clarence ..... Minneapolis
§Devereaux, T. J. ..... Wayzata
§Diehl, H. S. ..... Minneapolis
Diessner, H. D. ..... Minneapolis
§Dorge, R. I. ..... Minneapolis
§Dornblaser, H. D. ..... Minneapolis
§Dorsey, G. C. ..... Minneapolis
Dowidat, R. W. ..... Minneapolis
Doxey, G. L. ..... Minneapolis
§Doyle, L. O. ..... Minneapolis
§Drake, C. R. ..... Minneapolis
§Drill, H. E. ..... Hopkins
§Duff, E. R. ..... Minneapolis
§Dukelow, D. A. ..... Minneapolis
*Dumas, A. G. ..... Minneapolis
§Dunlap, E. H. ..... Minneapolis
§Dunn, G. R. ..... Minneapolis
§Dupont, J. A. ..... Excelsior
§Duryea, W. M. ..... Minneapolis
†Dutton, C. E. ..... Minneapolis
§Dvorak, B. A. ..... Minneapolis
§Dwan, P. F. ..... Minneapolis
§Dworsky, S. D. ..... Minneapolis
Ebert, R. V. ..... Minneapolis
§*Ederer, J. J. ..... Minneapolis
§Ehrenberg, C. J. ..... Minneapolis
§Eich, Matthew ..... Minneapolis
Eisenstadt, D. H. ..... Minneapolis
Eisenstadt, W. S. ..... Minneapolis
§Eitel, G. D. ..... Minneapolis
§Ellison, D. E. ..... Minneapolis
§Engelhart, P. C. ..... Minneapolis
Englund, E. F. ..... Minneapolis
§Engstrand, O. J. ..... Minneapolis
Erickson, C. O. ..... Minneapolis
Erickson, D. J. ..... Minneapolis
§Erickson, R. F. ..... Minneapolis
§Ericson, R. M. ..... Minneapolis
§Erlich, S. P. ..... Minneapolis
§Evans, E. T. ..... Minneapolis
Evans, R. D. ..... Minneapolis
Fahr, G. E. ..... Minneapolis
§Fansler, W. A. ..... Minneapolis
†Farsht, I. J. ..... Minneapolis
†Farkas, J. V. ..... Minneapolis
Feeney, J. M. ..... Minneapolis
§Feinstein, J. Y. ..... Minneapolis
Fenger, E. P. K. ..... Oak Terrace
§Fetterly, Warren ..... Minneapolis
§Fink, L. W. ..... Minneapolis
§Fink, W. H. ..... Minneapolis
†Fitzgerald, D. F. ..... Minneapolis
§Fjelstad, C. A. ..... Minneapolis
Fleeson, W. H. ..... Minneapolis
§Foker, L. W. ..... Minneapolis
§Ford, W. H. ..... Minneapolis
Foster, W. K. ..... Minneapolis
§Fowler, L. H. ..... Minneapolis
Fox, J. R. ..... Minneapolis
Frane, D. B. ..... Minneapolis
Frank, W. L., Jr. ..... Minneapolis
Frear, Rosemary R. ..... Minneapolis
§Fredericks, G. M. ..... Minneapolis
§Fredlund, M. L. ..... Minneapolis
§Fried, L. A. ..... Minneapolis
§Friedell, Aaron ..... Minneapolis
Friend, A. W. ..... Minneapolis
Frost, J. B. ..... Minneapolis
Frykman, H. M. ..... Minneapolis
Fuller, Alice H. ..... Minneapolis
§Funk, V. K. ..... Oak Terrace
Galligan, Margaret M. D. ..... Minneapolis
§Galloway, J. B. ..... Minneapolis
§Gammell, J. H. ..... Minneapolis
Garten, J. L. ..... Minneapolis
Gibbs, R. W. ..... Minneapolis
§Giebenhaan, J. N. ..... Minneapolis
§Giere, I. C. ..... Minneapolis
§Giere, R. W. ..... Minneapolis
†Giessler, P. W. ..... Minneapolis
Gilbert, M. G. ..... Minneapolis
*§Gilles, F. L. ..... Minneapolis
Gingold, B. A. ..... Minneapolis
§Girvin, R. B. ..... Minneapolis
§‡Goldberg, I. M. ..... Minneapolis
§Goldman, T. I. ..... Minneapolis
Goldner, M. Z. ..... Minneapolis
§Good, H. D. ..... Minneapolis
Gordon, P. E. ..... Minneapolis
Gratzek, F. R. ..... Minneapolis
§Grave, Floyd ..... Minneapolis
Gray, R. C. ..... Minneapolis
Green, R. G. ..... Minneapolis
Grimes, Marian ..... Minneapolis
§Gronvall, P. R. ..... Minneapolis
Groskloss, H. H. ..... Minneapolis
*Gunderson, N. A. ..... Minneapolis
§Gushurst, E. G. ..... Minneapolis
§Gustason, H. T. ..... Minneapolis
Haberer, Helen R. ..... Minneapolis
Hagen, P. S. ..... Minneapolis
§‡Hagen, W. S. ..... Minneapolis
†Haggard, G. D. ..... Minneapolis
Hall, G. H., Jr. ..... Minneapolis
Hall, H. B. ..... Minneapolis
*Hall, J. M. ..... Minneapolis
Hall, W. H. ..... Minneapolis
Hallberg, C. A. ..... Minneapolis
*§Hamel, A. L. ..... Minneapolis
§Hamlin, G. B. ..... Minneapolis
§†Hammerstad, L. M. ..... Minneapolis
Hammond, A. J. ..... Minneapolis
§Hannah, H. B. ..... Minneapolis
§Hansen, C. O. ..... Minneapolis
§Hansen, E. W. ..... Minneapolis
Hansen, Olga S. ..... Minneapolis
§Hanson, H. J. ..... Minneapolis
Hanson, H. V. ..... Minneapolis
§Hanson, M. B. ..... Minneapolis
§Hanson, W. A. ..... Minneapolis
§Happe, L. J. ..... Minneapolis
*Harrington, C. D. ..... Wayzata
*§†Harrington, F. E. ..... Minneapolis
§Hart, V. L. ..... Minneapolis
§Hartig, Hermina ..... Minneapolis
§†Hartzell, T. B. ..... Minneapolis
§Hastings, D. R. ..... Minneapolis
Hastings, D. W. ..... Minneapolis
Hauge, E. T. ..... Minneapolis
Haugen, J. A. ..... Minneapolis
§Haven, W. K. ..... Minneapolis
§Hawkinson, R. P. ..... Minneapolis
§Hayes, T. M. ..... Minneapolis
‡Hays, A. T. ..... Minneapolis
§Head, D. P. ..... Minneapolis
§Head, G. D. ..... Minneapolis
Hedback, A. E. ..... Minneapolis
§Heim, R. R. ..... Minneapolis
†Hendrickson, J. F. ..... Minneapolis
§Henrikson, E. C. ..... Minneapolis
†Henry, C. E. ..... Kirksville, Mo.
Henry, M. O. ..... Minneapolis
Herbert, W. L. ..... Minneapolis
Hertzog, A. J. ..... Minneapolis
Higgins, J. H. ..... Minneapolis
*†Hill, Eleanor J. ..... Minneapolis
§Hillis, S. J. ..... Minneapolis
Hinckley, R. G. ..... Minneapolis
§Hirshfield, F. R. ..... Minneapolis
‡Hitchcock, C. R. ..... Minneapolis
†Hoaglund, A. W. ..... Santa Monica, Calif.
§Hodge, S. V. ..... Minneapolis
†Hoffbauer, F. W. ..... Minneapolis
§Hoffert, H. E. ..... Minneapolis
§Hoffman, R. A. ..... Minneapolis
§Hoffman, W. L. ..... Minneapolis
*†Holl, P. M. ..... Minneapolis
§Holmberg, C. J. ..... Minneapolis
Holzapfel, F. C. ..... Minneapolis
§Horns, R. C. ..... Minneapolis
Houkom, Bjarne ..... Minneapolis
Hovland, M. L. ..... Minneapolis
Howard, S. E. ..... Minneapolis
Hudson, G. E. ..... Minneapolis
§Huenekens, E. J. ..... Minneapolis
§Hultkrans, J. C. ..... Minneapolis
Hultkrans, R. E. ..... Minneapolis
Hurd, Annah ..... Minneapolis
§‡Hutchinson, C. J. ..... Minneapolis
Hutchinson, D. W. ..... Oak Terrace
§Hymes, Charles ..... Minneapolis
§Hynes, J. E. ..... Minneapolis
Iams, A. M. ..... Minneapolis
Irvine, H. G. ..... Minneapolis
§Iverson, R. M. ..... Minneapolis
*†Jackson, C. M. ..... Minneapolis
‡James, E. M. ..... Minneapolis
§Jensen, Harry ..... Minneapolis
§†Jensen, M. J. ..... Minneapolis
Jensen, N. K. ..... Minneapolis
Jensen, R. A. ..... Minneapolis
†Jerome, Bourne ..... Minneapolis
§Johnson, A. B. ..... Minneapolis
Johnson, A. E. ..... Minneapolis
Johnson, Evelyn V. ..... Minneapolis
Johnson, E. W. ..... Minneapolis
§Johnson, H. A. ..... Minneapolis
§Johnson, J. A. ..... Minneapolis
†Johnson, J. W. ..... Minneapolis
§Johnson, Julius ..... Minneapolis
§Johnson, M. R. ..... Minneapolis
†Johnson, N. A. ..... Santa Monica, Calif.
Johnson, Norman ..... Minneapolis
Johnson, N. T. ..... Minneapolis
Johnson, R. A. ..... Minneapolis
‡Johnson, Raymond A. ..... Minneapolis
Johnson, R. E. ..... Minneapolis
Johnson, Y. T. ..... Minneapolis
Jones, H. W., Jr. ..... Minneapolis
§Jones, W. R. ..... Minneapolis
Josewich, Alexander ..... Minneapolis
§Judd, W. H. ..... Washington, D. C.
§Jurdy, M. J. ..... Minneapolis
Kabler, P. W. ..... Minneapolis
Kalin, O. T. ..... Minneapolis
Kaplan, J. J. ..... Minneapolis
‡Karleen, C. J. ..... Minneapolis
Karlstrom, A. E. ..... Minneapolis
§Kaufman, H. J. ..... Minneapolis
§Kelby, G. M. ..... Minneapolis
Kelly, J. P. ..... Minneapolis
§Kennedy, C. C. ..... Minneapolis
Kennedy, Jane F. ..... Minneapolis
§Kerkhof, A. C. ..... Minneapolis
Kertesz, G. ..... Minneapolis
†King, E. A. ..... Minneapolis
King, F. W. ..... Oak Terrace
§Kinsella, T. J. ..... Minneapolis
§Kistler, A. J. ..... Minneapolis
§†Kistler, C. M. ..... Minneapolis
§Knapp, M. E. ..... Minneapolis
§Knight, R. R. ..... Minneapolis
Knight, R. T. ..... Minneapolis
§Koepcke, G. M. ..... Minneapolis
Koller, H. M. ..... Minneapolis
Koller, L. R. ..... Minneapolis
Korchik, J. P. ..... Minneapolis
Koschnitzke, Herman ..... Minneapolis
§Koucky, R. W. ..... Minneapolis
Kucera, F. J. ..... Hopkins
§Kucera, W. J. ..... Minneapolis
Lagaard, S. M. ..... Minneapolis
Lajoie, J. M. ..... Minneapolis
§Lang, L. A. ..... Minneapolis
§Lapierre, A. P. ..... Minneapolis
§Lapierre, J. T. ..... Minneapolis
Larsen, F. W. ..... Minneapolis
§Larson, C. M. ..... Minneapolis
Larson, E. A. ..... Minneapolis
§Larson, Lawrence M. ..... Minneapolis
§Larson, L. M. ..... Oak Terrace
§Larson, P. N. ..... Minneapolis
§La Vake, R. T. ..... Minneapolis
Law, S. G. ..... Minneapolis
§Laymon, C. W. ..... Minneapolis
†Leavitt, H. H. ..... Minneapolis
Lebowske, J. A. ..... Minneapolis
Lee, H. M. ..... Minneapolis
§Leland, H. R. ..... Minneapolis
§Lenz, O. A. ..... Minneapolis
§Leonard, L. J. ..... Minneapolis
§Leonard, Sam ..... Minneapolis
Lillehei, E. J. ..... Robbinsdale
‡Lind, C. J., Jr. ..... Minneapolis
Lind, C. J. ..... Minneapolis
Lindberg, A. C. ..... Minneapolis
§Lindberg, V. L. ..... Minneapolis
§Lindbloom, A. E. ..... Minneapolis
§Lindgren, R. C. ..... Minneapolis
§Lindquist, R. H. ..... Minneapolis
§Linner, H. P. ..... Minneapolis
Lippman, E. S. ..... Minneapolis
§Lipschultz, Oscar ..... Minneapolis
§Litchfield, J. T. ..... Minneapolis
Litman, A. B. ..... Minneapolis
§†Litzenberg, J. C. ..... Minneapolis
§Lofsness, S. V. ..... Minneapolis
§Logefeil, R. C. ..... Minneapolis
§Loomis, E. A. ..... Minneapolis
Lovett, Beatrice R. ..... Oak Terrace
Lowry, Elizabeth C. ..... Minneapolis
Lowry, Thomas ..... Minneapolis
§Lufkin, N. H. ..... Minneapolis
Lund, C. J. ..... Minneapolis

Lundberg, Ruth I. ..... Minneapolis
Lundblad, R. A. ..... Minneapolis
Lundblad, S. W. ..... Minneapolis
§Lundgren, A. C. ..... Minneapolis
§Lundquist, E. F. ..... Minneapolis
§Lynch, M. J. ..... Minneapolis
Lysne, Henry ..... Minneapolis
§Lysne, Myron ..... Minneapolis
†MacDonald, A. E. ..... Minneapolis
§MacDonald, D. A. ..... Minneapolis
§Mach, F. B. ..... Minneapolis
MacKinnon, D. C. ..... Minneapolis
§MacMillan, D. G. ..... Minneapolis
Macnie, J. S. ..... Minneapolis
§Maeder, E. C. ..... Minneapolis
§Maland, C. O. ..... Minneapolis
§Mariette, E. S. ..... Oak Terrace
§Mark, D. B. ..... Minneapolis
§Marking, G. H. ..... Minneapolis
Martinson, C. J. ..... Wayzata
†Martinson, E. J. ..... Wayzata
†Matchan, G. R. ..... Minneapolis
Matthews, Justus ..... Minneapolis
§Mattill, P. M. ..... Oak Terrace
§Mattson, Hamlin ..... Minneapolis
§Maxeiner, S. R. ..... Minneapolis
§†McCaffrey, F. J. ..... Minneapolis
McCarthy, Donald ..... Minneapolis
McCartney, J. S. ..... Minneapolis
‡McCrimmon, H. P. ..... Minneapolis
†McDaniel, Orianna ..... Minneapolis
§McFarland, A. H. ..... Minneapolis
§McGandy, R. F. ..... Minneapolis
§McGeary, G. E. ..... Minneapolis
§McInerny, M. W. ..... Minneapolis
McKelvey, J. L. ..... Minneapolis
§McKenzie, C. H. ..... Minneapolis
§McKinlay, C. A. ..... Minneapolis
†McKinley, J. C. ..... Minneapolis
§McKinney, F. S. ..... Minneapolis
McMurtrie, W. B. ..... Minneapolis
§McPheeters, H. O. ..... Minneapolis
†McQuarrie, Irvine ..... Minneapolis
Meller, R. L. ..... Minneapolis
§Merkert, C. E. ..... Minneapolis
§Merkert, G. L. ..... Minneapolis
†Merrick, Charlotte T. ..... Minneapolis
†Merrill, Elizabeth ..... Minneapolis
§Meyer, A. J. ..... Minneapolis
§Meyer, E. L. ..... Minneapolis
Michael, J. C. ..... Minneapolis
Michel, H. H. ..... Minneapolis
§Michelson, H. E. ..... Minneapolis
†Mickelsen, Emma F. ..... Minneapolis
§Miller, Harold E. ..... Minneapolis
Miller, Hugo E. ..... Minneapolis
§Miller, J. C. ..... Minneapolis
§Milton, J. S. ..... Minneapolis
§Minsky, A. A. ..... Minneapolis
Mitchell, B. D. ..... Minneapolis
Mitchell, E. C. ..... Mound
Mitchell, M. E. ..... Minneapolis
§Mitchell, M. T. ..... Minneapolis
§Moe, J. H. ..... Minneapolis
§Moen, J. K. ..... Minneapolis
Monahan, Elizabeth S. ..... Minneapolis
§Monson, E. M. ..... Minneapolis
Moos, D. J. ..... Minneapolis
Moren, Edward ..... Minneapolis
Morrison, A. W. ..... Minneapolis
Morrison, Charlotte J. ..... Minneapolis
§Morse, R. W. ..... Minneapolis
§Murphy, E. P. ..... Minneapolis
§Murphy, I. J. ..... Minneapolis
†Musty, N. J. ..... Minneapolis
§Myers, J. A. ..... Minneapolis
§Naslund, A. W. ..... Minneapolis
§Neal, J. M. ..... Minneapolis
Neary, R. P. ..... Minneapolis
Nelson, E. N. ..... Minneapolis
†Nelson, H. S. ..... Los Angeles, Calif.
§Nelson, M. C. ..... Minneapolis
§Nelson, N. Harvey ..... Minneapolis
§Nelson, O. L. N. ..... Minneapolis
§‡Nelson, W. I. ..... Minneapolis
Nesbitt, Samuel ..... Minneapolis
Nesset, L. B. ..... Marshall
Noonan, W. J. ..... Minneapolis
§Nord, Robert E. ..... Minneapolis
§Noran, Harold H. ..... Minneapolis
§Nordin, G. T. ..... Minneapolis
Nordland, Martin ..... Minneapolis
§†Noth, H. W. ..... Minneapolis
§Nydahl, M. J. ..... Minneapolis
§Nylander, E. G. ..... Minneapolis
Nystrom, Ruth G. ..... Minneapolis
§Oberg, C. M. ..... Minneapolis
†O'Brien, W. A. ..... Minneapolis
O'Donnell, J. E. ..... Minneapolis
Olsen, E. G. ..... Minneapolis
§Olson, A. C. ..... Minneapolis
Olson, J. W. ..... Minneapolis
†Olson, O. A. ..... Minneapolis
§†Olson, R. G. ..... Minneapolis

§Oppen, E. G. ..... Minneapolis
Otten, D. E. ..... Minneapolis
†Owre, Oscar ..... Minneapolis
§Paine, J. R. ..... Minneapolis
Palen, B. J. ..... Minneapolis
§*Patterson, W. E. ..... Minneapolis
§Peppard, T. A. ..... Minneapolis
Perlman, E. C. ..... Minneapolis
‡Petersen, G. L. ..... Minneapolis
§†Petersen, J. R. ..... Minneapolis
Peterson, Henry ..... Minneapolis
Peterson, H. W. ..... Minneapolis
Peterson, L. J. ..... Minneapolis
Peterson, N. P. ..... Minneapolis
Peterson, O. H. ..... Minneapolis
§Peterson, P. E. ..... Minneapolis
§Peterson, W. C. ..... Minneapolis
§Petit, J. V. ..... Minneapolis
§Petit, L. J. ..... Minneapolis
Pewters, J. T. ..... Minneapolis
Peyton, W. T. ..... Minneapolis
§Pfunder, M. C. ..... Minneapolis
§Phelps, K. A. ..... Minneapolis
Plass, H. F. R. ..... Minneapolis
§Platou, E. S. ..... Minneapolis
§Pleissner, K. W. ..... St. Louis Park
§Plimpton, N. C. ..... Minneapolis
§Pohl, J. F. ..... Minneapolis
§Pollard, D. W. ..... Minneapolis
§Pollock, D. K. ..... Minneapolis
§Polzak, J. A. ..... Minneapolis
Poppe, F. H. ..... Minneapolis
§Potter, R. B. ..... Minneapolis
Pratt, F. J. ..... Minneapolis
§Preine, I. A. ..... Minneapolis
Preston, P. J. ..... Minneapolis
Priest, R. E. ..... Minneapolis
§†Prim, J. A. ..... Minneapolis
Proffitt, W. E. ..... Minneapolis
§Proshek, C. E. ..... Minneapolis
§Pumala, E. E. ..... Minneapolis
§Quello, R. O. B. ..... Minneapolis
§*†Quinby, T. F. ..... Minneapolis
§Quist, H. W. ..... Minneapolis
†Quist, H. W., Jr. ..... Minneapolis
§Ransom, H. R. ..... Osseo
Reader, D. R. ..... Minneapolis
Regan, J. J. ..... Minneapolis
§Regnier, E. A. ..... Minneapolis
Reid, L. M. ..... Excelsior
§Reif, H. A. ..... Minneapolis
§Reiley, R. E. ..... Minneapolis
§Reynolds, J. S. ..... Minneapolis
§Rice, C. O. ..... Minneapolis
§Richdorf, L. F. ..... Minneapolis
§Rieke, W. W. ..... Wayzata
Rigler, L. G. ..... Minneapolis
Riordan, Elsie M. ..... Minneapolis
§Risch, R. E. ..... Minneapolis
Rizer, D. K. ..... Minneapolis
Rizer, R. I. ..... Minneapolis
§*Roan, C. M. ..... Minneapolis
Roan, O. M. ..... Minneapolis
Robb, E. F. ..... Minneapolis
§Robbins, O. F. ..... Minneapolis
Roberts, L. J. ..... Minneapolis
Roberts, S. W. ..... Minneapolis
§Roberts, W. B. ..... Minneapolis
Robitshek, E. C. ..... Minneapolis
§Rodda, F. C. ..... Minneapolis
§Rodgers, C. L. ..... Minneapolis
Rogers, G. E. B. ..... Minneapolis
Rosendahl, F. G. ..... Minneapolis
§Rosenwald, R. M. ..... Minneapolis
Roskilly, G. C. P. ..... Minneapolis
§Ross, A. J. ..... Minneapolis
§Rucker, W. H. ..... Minneapolis
Rud, N. E. ..... Minneapolis
Rudell, G. L. ..... Minneapolis
Russeth, A. N. ..... Minneapolis
§Rusten, E. M. ..... Minneapolis
§Ryding, V. T. ..... Howard Lake
§Sadler, W. P. ..... Minneapolis
§St. Cyr, K. J. ..... Robbinsdale
§Saliterman, B. I. ..... Minneapolis
§*Salt, C. G. ..... Minneapolis
Samuelson, Samuel ..... Minneapolis
§Sandt, R. E. ..... Minneapolis
§Sawatzky, W. A. ..... Minneapolis
§Schaaf, F. H. K. ..... Minneapolis
§Schaefer, W. G. ..... Minneapolis
†Scheldrup, N. H. ..... Minneapolis
§Scherer, L. R. ..... Minneapolis
Schiele, B. C. ..... Minneapolis
§Schmidt, G. F. ..... Minneapolis
†Schmitt, A. F. ..... Minneapolis
†Schmitt, S. C. ..... Los Angeles, Calif.
†Schneider, J. P. ..... Minneapolis
Schneider, R. A. ..... Minneapolis
†Schneidman, N. R. ..... Minneapolis
Schottler, M. E. ..... Minneapolis
§Schultz, H. J. ..... Minneapolis
§‡Schultz, P. J. ..... Minneapolis
†Schussler, O. F. ..... Minneapolis

§Schwartz, V. J. ..... Minneapolis
†Schwyzer, Gustav ..... Minneapolis
†Scott, F. H. ..... Minneapolis
§Scott, H. G. ..... Minneapolis
Seaberg, J. A. ..... Minneapolis
§†Seashore, Gilbert ..... Minneapolis
Seham, Max ..... Minneapolis
§Seifert, M. H. ..... Excelsior
§Selieskog, S. R. ..... Minneapolis
§Shandorf, J. F. ..... Minneapolis
Shaperman, Eva P. ..... Minneapolis
§Shapiro, M. J. ..... Minneapolis
Sharp, D. V. ..... Minneapolis
§Siegmann, W. C. ..... Minneapolis
Silver, J. D. ..... Minneapolis
§†Simons, J. H. ..... Minneapolis
Simonson, D. B. ..... Minneapolis
§Simpson, E. D. ..... Minneapolis
Sinykin, M. B. ..... Minneapolis
Siperstein, D. M. ..... Minneapolis
†§Sivertsen, Andrew ..... Nisswa
§Sivertsen, Ivar ..... Minneapolis
§Skjold, A. C. ..... Minneapolis
§‡Smisek, F. M. ..... Minneapolis
§Smith, Adam M. ..... Minneapolis
§Smith, Archie M. ..... Minneapolis
Smith, B. A., Jr. ..... Minneapolis
Smith, H. R. ..... Minneapolis
Smith, Margaret I. ..... Minneapolis
§Smith, N. M. ..... Minneapolis
Smith, N. R. ..... Minneapolis
Soderlind, R. T. ..... Minneapolis
§Solhaug, S. B. ..... Minneapolis
§Spano, J. P. ..... Minneapolis
§Spink, W. W. ..... Minneapolis
§Spratt, C. N. ..... Minneapolis
Stahr, A. C. ..... Hopkins
§Stanford, C. E. ..... Minneapolis
State, David ..... Minneapolis
Stebbins, T. L. ..... Minneapolis
Stein, K. E. ..... Lakeville
§Stelter, L. A. ..... Minneapolis
Stennes, J. L. ..... Minneapolis
Stenstrom, Annette T. ..... Minneapolis
§Stewart, R. I. ..... Minneapolis
Stoesser, A. V. ..... Minneapolis
†Stomel, Joseph ..... Los Angeles, Calif.
†Strachauer, A. C. ..... Minneapolis
Strom, G. W. ..... Minneapolis
Stromgren, D. T. ..... Minneapolis
§Stromme, W. B. ..... Minneapolis
Stone, S. P. ..... Minneapolis
§Strout, G. E. ..... Minneapolis
§Sturre, J. R. ..... Minneapolis
§Stuurmans, S. H. ..... Minneapolis
§Sukov, Marvin ..... Minneapolis
Sullivan, R. M. ..... Minneapolis
Sullivan, R. R. ..... Minneapolis
§*Sundt, Mathias ..... Minneapolis
Swanson, R. E. ..... Minneapolis
Swanson, V. F. ..... Minneapolis
§Sweetser, H. B., Jr. ..... Minneapolis
†Sweetser, H. B., Sr. ..... Minneapolis
§Sweetser, T. H. ..... Minneapolis
Sweitzer, S. E. ..... Minneapolis
§†Swendseen, C. G. ..... Minneapolis
§Tangen, G. M. ..... Minneapolis
Taylor, J. H. ..... Minneapolis
§Tenner, R. J. ..... Minneapolis
§Thomas, G. E. ..... Minneapolis
†Thomas, G. H. ..... Minneapolis
§Thompson, W. H. ..... Minneapolis
§Thysell, D. M. ..... Minneapolis
§Tingdale, A. C. ..... Minneapolis
Titrud, L. A. ..... Minneapolis
Todd, Romona L. ..... Minneapolis
§Trach, Benedict ..... Minneapolis
§Trow, J. E. ..... Minneapolis
‡Trow, W. H. ..... Minneapolis
Troxil, Elizabeth B. ..... Minneapolis
Trueman, H. S. ..... Minneapolis
§Tudor, R. B. ..... Minneapolis
§Tunstead, H. J. ..... Minneapolis
§Turnacliff, D. D. ..... Minneapolis
§Ude, W. H. ..... Minneapolis
Ulrich, H. L. ..... Minneapolis
§Undine, C. A. ..... Minneapolis
Vik, A. E. ..... Minneapolis
§Wahlquist, H. F. ..... Minneapolis
§Walch, A. E. ..... Minneapolis
§Waldron, C. W. ..... Minneapolis
§Wall, C. R. ..... Minneapolis
Walsh, F. M. ..... Minneapolis
Walsh, W. T. ..... Minneapolis
Wangensteen, O. H. ..... Minneapolis
Ward, P. A. ..... Minneapolis
§Watson, C. G. ..... Minneapolis
§Watson, C. J. ..... Minneapolis
Weaver, M. M. ..... Minneapolis
§Webb, E. A. ..... Minneapolis

§Webb, R. C.....Minneapolis
Werner, George.....Minneapolis
Werner, R. F.....Minneapolis
†West, Catharine C.....Minneapolis
‡Westphal, K. F.....Minneapolis
§Wethall, A. G.....Minneapolis
Wetherby, Macnider.....Minneapolis
§Weum, T. W.....Minneapolis
White, A. A.....Minneapolis
§White, S. M.....Minneapolis
‡White, W. D.....Minneapolis
§Whitesell, L. A.....Minneapolis
§Widen, W. F.....Minneapolis
Wiechman, F. H. .....Minneapolis
Wilcox, A. E.....Minneapolis
§†Willcutt, C. E.....Phoenix, Ariz.
‡Wildebush, F. F.....Minneapolis
Wilder, K. W.....Minneapolis
§Wilder, R. L.....Minneapolis
Wilder, R. M., Jr.....Minneapolis
§Wilken, P. A.....Minneapolis
†Williams, Robert.....Carthage, Ill.
Winther, Nora M. C.....Minneapolis
‡Wipperman, F. F.....Minneapolis
§Witham, C. A.....Minneapolis
Wittich, F. W.....Minneapolis
Wolf, A. H.....Minneapolis
•Wolf, W. W.....Minneapolis
§Wohlrabe, A. A.....Minneapolis
†Wright, C. D.....Minneapolis
§Wright, S. G.....Minneapolis
Wright, W. S.....Minneapolis
Wyatt, O. S.....Minneapolis
Wynne, H. M. N.....Minneapolis
§Ylvisaker, R. S.....Minneapolis
§Yoerg, O. W.....Minneapolis
Zierold, A. A.....Minneapolis
§Zinter, F. A.....Minneapolis
Ziskin, Thomas.....Minneapolis

KANDIYOHI-SWIFT-MEEKER COUNTY MEDICAL SOCIETY

Regular meetings, second Wednesday of month
Annual meeting, November
Number of Members: 40

President
Lindley, S. B.....Willmar
Secretary
Wilmot, H. E.....Litchfield

Anderson, R. E.....Willmar
Arnson, J. M.....Benson
Bosland, H. G.....Willmar
§Branton, B. J. .....Willmar
Daignault, Oscar.....Benson
Danielson, K. A.....Litchfield
Danielson, Lennox.....Litchfield
Dille, D. E.....Litchfield
§Doswell, W. J. .....Kerkhoven
Eberley, T. S.....Benson
Fisher, J. M.....Willmar
Frederickson, Alice C.....Willmar
Frederickson, G. U. Y.....Willmar
Frisch, F. P.....Willmar
§Frost, E. H.....Willmar
Giere, S. W.....Benson
Gilman, L. C.....Willmar
Hodapp, R. J.....Willmar
§Jacobs, D. L.....Willmar
§Jacobs, J. C. .....Willmar
Johnson, Hans.....Kerkhoven
Kaufman, E. J.....Appleton
Lindley, S. B.....Willmar
Macklin, W. E.....Mankato
Mattson, Albert D.....Madison
Michels, R. P. .....Willmar
O'Connor, D. C.....Eden Valley
Penhall, F. W. .....Willmar
Peterson, Willard E.....Willmar
Porter, O. M.....Willmar
Proeschel, R. K.....Willmar
Ripple, R. J.....New London
Rygh, Harold N.....Atwater
†Scofield, C. L.....Benson
Sellers, G. K.....Dassel
Solsem, F. N.....Ah-Gwah-Ching
Telford, V. J.....Litchfield
Tyler, S. H.....Raymond
Wilmot, C. A.....Litchfield
Wilmot, H. E.....Litchfield

LYON-LINCOLN COUNTY MEDICAL SOCIETY

Regular meetings, first Tuesday of month
Annual meeting, last Tuesday in October
Number of Members: 26

President
Wolstan, S. D.....Minneota
Secretary
Workman, W. G.....Tracy

Akester, Ward.....Fergus Falls
Eckdale, J. E.....Marshall
Ferguson, W. C.....Walnut Grove
§Ford, B. C.....Marshall
Frank, J. E.....Marshall
Friedell, George.....Ivanhoe
Gray, F. D.....Marshall
Helferty, J. K.....Minneapolis
Hermanson, P. E.....Hendricks
§Hoidale, A. D.....Tracy
Johnson, P. C.....Tyler
Kreuzer, T. C.....Marshall
Murphy, J. E.....Marshall
Patterson, R. B.....Marshall
Purves, G. H.....Hendricks
Remsberg, R. R.....Tracy
†Robertson, J. B.....Minneapolis
†Sanderson, E. T. .....Alexandria
Sether, A. F.....Ruthton
Smith, L. A.....Balaton
Thompson, C. O.....Hendricks
Vadheim, A. L.....Tyler
Vadheim, L. A. .....Tyler
§Valentine, W. H.....Tracy
Wolstan, S. D.....Minneota
Workman, W. G.....Tracy
Yaeger, W. W.....Marshall

McLEOD COUNTY MEDICAL SOCIETY

Regular meetings, second or third Wednesday of month
Annual meeting, January
Number of Members: 19

President
Truesdale, C. W.....Glencoe
Secretary
Gridley, J. W. .....Glencoe

Brink, D. M.....Hutchinson
Clement, J. B.....Lester Prairie
Goss, H. C.....Glencoe
Goss, Martha D.....Glencoe
Gridley, J. W. .....Glencoe
Holm, H. H.....Glencoe
Jensen, A. M.....Brownton
Kallestad, L. L.....Hutchinson
§Klima, W. W.....Stewart
Lippmann, E. W.....Hutchinson
McMahon, M. J.....Green Isle
Neumaier, Arthur.....Glencoe
Peterson, K. H.....Hutchinson
Rempel, D. D.....Lester Prairie
Sahr, W. G.....Hutchinson
Scholpp, O. W.....Hutchinson
Selmo, J. D.....Norwood
§Sheppard, C. G.....Hutchinson
Truesdale, C. W.....Glencoe
Trutna, T. J.....Silver Lake

MOWER COUNTY MEDICAL SOCIETY

Regular meeting, last Thursday of each month
Annual meeting, December
Number of Members: 27

President
Leck, P. C.....Austin
Secretary
Rosenthal, F. H. .....Austin

§•Allen, C. C.....Austin
‡Allen, H. B.....Austin
§Anderson, D. P., Jr. .....Austin
§Barber, Tracy E.....Austin
§Cronwell, B. J.....Austin
Fisch, H. M.....Austin
§Flanagan, L. G.....Austin
§Grise, W. B.....Austin
§Havens, J. G. W.....Austin
Hegge, O. H.....Austin
§Hegge, R. S.....Austin
Henslin, A. E.....Le Roy
Henslin, M. E.....Le Roy
§Hertel, G. E.....Austin
§Leek, P. C.....Austin
§Lommen, P. A.....Austin
§McKenna, J. K.....Austin
Melzer, G. R.....Lyle
Morse, M. P.....Le Roy
§Robertson, P. A.....Austin
§Rosenthal, F. H.....Austin
Schneider, P. J.....Adams
§Schottler, G. J.....Dexter
§Sheedy, C. L.....Austin
Thomson, J. M. .....Minneapolis
§Wilson, F. C.....Austin
§Wright, R. R. .....Austin

NICOLLET-LE SUEUR COUNTY MEDICAL SOCIETY

Regular meetings, every four months
Annual meeting, December
Number of Members: 24

President
Johnson, H. O.....Mankato
Secretary
Wohlrabe, C. F.....Mankato

†Aitkens, H. B.....LeCenter
Covell, W. W.....St. Peter
§Curtis, R. A.....LeCenter
§Ericson, Swan.....Le Sueur
Freeman, G. H.....St. Peter
§Giroux, A. A. .....North Mankato
§Grimes, B. P.....St. Peter
§Hiniker, P. J.....Le Sueur
Holtan, Theodore.....Waterville
§Johnson, H. C.....North Mankato
Kolars, J. J.....Faribault
Lanhoff, A. H.....St. Peter
§Larson, M. H.....Nicollet
§Lenander, M. E.....St. Peter
§Navratil, D. R.....Montgomery
§Nilson, H. J.....North Mankato
§Olmanson, E. G.....St. Peter
§Olson, D. C.....Gaylord
§Sonnesyn, N. N.....Le Sueur
§Sjostrom, L. E. .....St. Peter
§Strathern, C. S.....St. Peter
§Strathern, F. P.....St. Peter
§Traxler, J. F.....Henderson
§Wohrabe, C. F. .....North Mankato

OLMSTED-HOUSTON-FILLMORE-DODGE COUNTY MEDICAL SOCIETY

Regular meetings, first Wednesday every odd month
Annual meeting, November
Number of Members: 662

President
Gray, H. K. ..... Rochester

Secretary
Carryer, H. M. ..... Rochester

Abbott, K. H. ..... Rochester
§Adams, R. C. ..... Rochester
§Adson, A. W. ..... Rochester
§Ahlfs, J. J. ..... Caledonia
§Aldrich, C. A. ..... Rochester
§Allen, E. V. ..... Rochester
§Alvarez, W. C. ..... Rochester
Amberg, Samuel ..... Rochester
Ambrusko, J. S. ..... Rochester
Anderson, C. D. ..... Rochester
Anderson, M. E., Jr. ..... Rochester
§Anderson, M. J. ..... Rochester
§Anderson, M. W. ..... Rochester
*Anderson, N. E. ..... Harmony
§Anderson, R. E. ..... Rochester
Arling, P. A. ..... Rochester
‡Ashburn, F. S. ..... Rochester
§Ashley, W. F. ..... Rochester
§Askren, E. L., Jr. ..... Rochester
Babb, F. S. ..... Rochester
§Bacon, J. F. ..... Rochester
§Bailey, J. A. ..... Rochester
§Baggenstoss, A. H. ..... Rochester
§Bailey, J. A. ..... Rochester
§Bair, H. L. ..... Rochester
§Baker, G. S. ..... Rochester
Baker, H. R. ..... Hayfield
§Balfour, D. C. ..... Rochester
§‡Balfour, D. C., Jr. ..... Rochester
§Balfour, W. M. ..... Rochester
‡Banner, E. A. ..... Rochester
§Bargen, J. A. ..... Rochester
§Barger, J. D. ..... Rochester
§Barker, N. W. ..... Rochester
§Barnes, A. R. ..... Rochester
‡Barr, M. M. ..... Rochester
Bayrd, E. D. ..... Rochester
Beahrs, O. H. ..... Rochester
§Beare, J. B. ..... Rochester
‡Bearzy, H. J. ..... Rochester
§Belote, G. B. ..... Caledonia
§Benedict, W. L. ..... Rochester
‡Bennett, J. G. ..... Rochester
Bennett, J. K. ..... Phoenix, Ariz.
‡Bennett, W. A. ..... Rochester
§Berkman, D. M. ..... Rochester
§Berkman, D. S. ..... Rochester
§Berkman, J. M. ..... Rochester
§Bickel, W. H. ..... Rochester
§Bigelow, C. E. ..... Dodge Center
Biorn, C. L. ..... Rochester
Black, A. S., Jr. ..... Rochester
Black, B. M. ..... Rochester
Black, W. A. ..... Rochester
Blackburn, C. M. ..... Rochester
‡Blaisdell, J. S. ..... Rochester
§Boothby, W. M. ..... Rochester
§Bowing, H. H. ..... Rochester
Boylan, R. N. ..... Rochester
§Braasch, W. F. ..... Rochester
§Braastad, F. W. ..... Rochester
Bradley, W. F. ..... Rochester
Brandes, R. W. ..... Rochester
‡Breslow, Lester ..... Rochester
Briggs, Natalie M. ..... Wenatchee, Wash.
§Broders, A. C. ..... Rochester
Brooks, L. M. ..... Rochester
Brooksby, W. A. ..... Rochester
§Brown, A. E. ..... Rochester
§Brown, H. A. ..... Rochester
§Brown, H. S. ..... Rochester
Brown, M. H. ..... Rochester
§Brown, P. W. ..... Rochester
Browning, W. H. ..... Rochester
Brownson, B. C. ..... Rochester
§Brunsting, L. A. ..... Rochester
Bryan, A. L. ..... Rochester
§Buie, Louis A. ..... Rochester
§Burchell, H. B. ..... Rochester
Bush, R. P. ..... Rochester
§Butt, H. R. ..... Rochester
§Cain, J. C. ..... Rochester
Cameron, J. M. ..... Rochester
§Camp, J. D. ..... Rochester
§Campbell, D. C. ..... Rochester
Cariker, Mildred ..... Rochester
‡Carmona, M. G. ..... Rochester
§Carpenter, R. E. ..... Rochester
Carr, D. T. ..... Rochester
§Carryer H. M. ..... Rochester
Carter, J. W., Jr. ..... Rochester
Chapman, J. P., Jr. ..... Rochester
Chesley, G. L. ..... Rochester
Christensen, N. A. ..... Rochester
Ciaramelli, Letizia C. ..... Rochester
§Clagett, O. T. ..... Rochester
Clark, F. H. ..... Rochester
§Clark, L. W. ..... Spring Valley
‡Clarkson, W. R. ..... Rochester
§Clifton, T. A. ..... Chatfield
‡Cluxton, H. E., Jr. ..... Rochester
Collett, R. W. ..... Rochester
§Comfort, M. W. ..... Rochester
§Conley, F. W. ..... Rochester
Connery, D. B. ..... Rochester
§†Connor, H. M. ..... Rochester
§Cook, E. N. ..... Rochester
Cooper, Talbert ..... Rochester
§Corbin, K. B. ..... Rochester
Costin, M. E., Jr. ..... Rochester
§Counseller, V. S. ..... Rochester
§Coventry, M. B. ..... Rochester
Cox, W. B. ..... Rochester
*Cragg, R. W. ..... Rochester
§Craig, M. S., Jr. ..... Rochester
§Craig, W. McK. ..... Rochester
†Crewe, J. E. ..... Rochester
Cronkite, A. E. ..... Rochester
§Crowley, D. F., Jr. ..... Rochester
Cunningham, B. P. ..... Bridgeport, Conn.
Cunningham, E. S., Jr. ..... Rochester
Custer, M. D. ..... Rochester
‡Dahleen, H. C. ..... Rochester
§Dahlin, D. C. ..... Rochester
§Daniels, B. T. ..... Rochester
Darling, J. P. ..... Rochester
‡Daugherty, G. W. ..... Rochester
§Daut, R. V. ..... Rochester
‡Davies, L. T. ..... Rochester
§Davis, A. C. ..... Rochester
Davis, I. G. ..... Rushford
‡Davis, R. M. ..... Rochester
Day, Lois A. ..... Rochester
§Dearing, W. H., Jr. ..... Rochester
‡DeForest, R. E. ..... Rochester
Demong, C. V. ..... Rochester
§Desjardins, A. U. ..... Rochester
Deterling, R. A. ..... Rochester
Devine, K. D. ..... Rochester
DeVoe, R. W. ..... Rochester
Devney, J. W. ..... Rochester
DeWeerd, J. H. ..... Rochester
§Dickson, J. A., Jr. ..... Rochester
Diessner, G. R. ..... Rochester
Dille, R. S. ..... Rochester
§Dixon, C. F. ..... Rochester
§Dockerty, M. B. ..... Rochester
Doehring, P. C., Jr. ..... Boston, Mass.
Dolder, F. C. ..... Eyota
‡Donoghue, F. E. ..... Rochester
§Dornberger, G. R. ..... Rochester
Douglas, J. M. ..... Rochester
‡Douglass, B. E. ..... Rochester
†Drake, F. A. ..... Lanesboro
Drips, Della G. ..... Rochester
‡Drumheller, J. F. ..... Rochester
§Dry, T. J. ..... Rochester
DuMais, A. F. ..... Rochester
§Dunn, J. H. ..... Rochester
§Eaton, L. M. ..... Rochester
Edwards, J. E. ..... Rochester
Eckstam, E. E. ..... Rochester
Eger, Alban ..... Rochester
§Elkins, E. C. ..... Rochester
Ellliott, R. B. ..... Rochester
‡Ellis, F. H. ..... Rochester
Ellison, A. B. C. ..... Rochester
Emerson, G. F. ..... Rochester
§Emmett, J. L. ..... Rochester
§Erich, J. B. ..... Rochester
§Estes, J. E. ..... Rochester
§Eusterman, G. B. ..... Rochester
†Evarts, A. B. ..... Rochester
§Faber, J. E. ..... Rochester
Faber, W. M. ..... Rochester
Fair, E. E. ..... Rochester
§Farber, E. M. ..... Rochester
Faulconer, A., Jr. ..... Rochester
Fawcett, R. M. ..... Rochester
§Feldman, F. M. ..... Rochester
Ferguson, W. J., Jr. ..... Rochester
‡Ferguson, W. J. ..... Rochester
§Ferris, D. O. ..... Rochester
‡Ferris, H. A., Jr. ..... Rochester
§Figi, F. A. ..... Rochester
Fisher, R. L. ..... Rochester
§Fitzgibbons, R. J. ..... Rochester
§Flasher, Jack ..... Rochester
§Flashman, F. L. ..... Rochester
Fletcher, Mary E. H. ..... Rochester
Flickinger, F. M. ..... Lima, Ohio
§Flinn, J. H. ..... Rochester
‡Foerster, J. M. ..... Rochester
‡Fogarty, C. W., Jr. ..... Rochester
§Forney, R. A. ..... Rochester
Foss, E. L. ..... Rochester
‡Freeman, J. G. ..... Rochester
§Fricke, R. E. ..... Rochester
Fryfogle, J. D. ..... Rochester
§Gaarde, F. W. ..... Rochester
§Gaarde, F. W., Jr. ..... Rochester
§Gambill, E. E. ..... Rochester
Gastineau, C. F. ..... Rochester
Gentling, A. A. ..... Rochester
Gentry, R. W. ..... Rochester
§Ghormley, R. K. ..... Rochester
Gibson, R. H. ..... Rochester
‡Giffin, H. M. ..... Rochester
§Giffin, H. Z. ..... Rochester
Giffin, Mary E. ..... Rochester
§Glenn, W. V. ..... Rochester
Glover, R. P. ..... Rochester
‡Golden, P. B. ..... Rochester
Golden, R. F. ..... Rochester
§Good, C. A., Jr. ..... Rochester
Gordon, N. F. ..... Rochester
Gorsuch, M. T. ..... Rochester
§Graham, F. M. ..... Rochester
§Graham, R. B. ..... Rochester
Graham, R. J. ..... Rochester
Gramse, A. E. ..... Rochester
§Gray, H. K. ..... Rochester
Greene, L. F. ..... Rochester
Griess, D. F. ..... Rochester
Griffin, J. G. ..... Rochester
§Grindlay, J. H. ..... Rochester
§Groom, Dale ..... Rochester
Gross, J. B. ..... Rochester
§Grotting, J. K. ..... Rochester
‡Guernsey, D. E. ..... Minneapolis
§Habein, H. C. ..... Rochester
§Hagedorn, A. B. ..... Rochester
Haines, R. D. ..... Rochester
§Haines, S. F. ..... Rochester
§Hall, B. E. ..... Rochester
§Hallberg, O. E. ..... Rochester
§Hallenbeck, D. F. ..... Rochester
§Hallenbeck, G. A. ..... Rochester
Hamilton, D. F. ..... Rochester
‡Hamm, R. S. ..... Rochester
Hammes, E. M., Jr. ..... Rochester
‡Hanlon, G. H. ..... Rochester
Hansbro, G. L. ..... Rochester
Hanson, N. O. ..... Rochester
Hare, Helen J. ..... Rochester
§Hargraves, M. M. ..... Rochester
§Harrington, S. W. ..... Rochester
‡Hart, G. M. ..... Rochester
§Hartigan, J. D. ..... Rochester
§Hartman, H. R. ..... Rochester
Harvey, George, Jr. ..... Rochester
Hasskarl, W. F., Jr. ..... Rochester
Hatcher, A. C. ..... Rochester
§Havens, F. Z. ..... Rochester
§Haynes, Allan ..... Rochester
Headley, N. E. ..... Rochester
§Heck, F. J. ..... Rochester
§Heersema, P. H. ..... Rochester
Heilman, F. R. ..... Rochester
Heinrich, W. A. ..... Rochester
†Helland, G. M. ..... Spring Grove
§Helland, J. W. ..... Spring Grove
§Helmholz, H. F. ..... Rochester
§Hempstead, B. E. ..... Rochester
§Hench, P. S. ..... Rochester
§‡Henderson, E. D. ..... Rochester
§Henderson, J. W. ..... Rochester
§Henderson, L. L. ..... Rochester
§Henderson, M. S. ..... Rochester
§Henegar, G. C. ..... Rochester
Henkel, H. B. ..... Rochester
§Herbst, R. F. ..... Wykoff
§Herrell, W. E. ..... Rochester
Hewitt, Edith S. ..... Rochester
†Hewitt, R. M. ..... Rochester
†Heyerdale, O. C. ..... Rochester
Heyerman, O. T. ..... Rochester
Higgins, R. S. ..... Rochester
Higginson, J. F. ..... Rochester
Hightower, N. C., Jr. ..... Rochester
§Hill, J. R. ..... Rochester
§Hilton, H. D. ..... Rochester
§Hines, E. A., Jr. ..... Rochester
§Hinshaw, H. C. ..... Rochester
§Hodgson, C. H. ..... Rochester
Hodgson, J. R. ..... Rochester
Hollenhorst, R. W. ..... Rochester
§Holmes, C. L. ..... Rochester
§Holt, R. P. ..... Rochester
§Hoon, J. R. ..... Rochester
§Hoppes, E. E. ..... Rochester
§Horan, M. J. ..... Rochester
§Horton, B. T. ..... Rochester

Hosfeld, S. Marjorie.....Rochester
§Howell, L. P.....Rochester
Hughes, T. J.....Rochester
§Hunt, A. B.....Rochester
Hunt, V. W.....Rochester
‡Hurley, J. P.....Rochester
Hutchins, S. P. R.....Rochester
Irmisch, G. W.....Rochester
Irons, W. E.....Rochester
‡Iverson, H. A.....Rochester
Ivins, J. C.....Rochester
§Jackman, R. J.....Rochester
§Jackson, H. S.....Rochester
Janes, J. M.....Rochester
‡Jennings, D. T.....Rochester
Johns, Sylvia.....Rochester
§Johnson, B. H., Jr.....Rochester
‡Johnson, C. C.....Rochester
§Johnson, C. R.....Rochester
Johnson, M. A.....Lanesboro
Johnson, R. B.....Rochester
Jondahl, W. H.....Rochester
§Jones, R. H., Jr.....Rochester
§Joss, C. S.....Rochester
§Judd, E. S., Jr.....Rochester
Karstens, H. C.....Rochester
§Keating, F. R., Jr.....Rochester
§Keating, J. U.....Rochester
Keeley, J. K.....Rochester
Keffer, W. H.....Rochester
§Keith, H. M.....Rochester
§Keith, N. M.....Rochester
Kelsey, M. P.....Rochester
Kemper, C. M.....Rochester
§Kennedy, R. L. J.....Rochester
Kennedy, T. J.....Rochester
§Kepler, E. J.....Rochester
Kern, C. E.....Rochester
§Kernohan, J. W.....Rochester
§Kierland, R. R.....Rochester
§Kiernan, P. C.....Rochester
§Kirby, J. L.....Rochester
Kirkland, W. G.....Rochester
§Kirklin, B. R.....Rochester
§Kirklin, O. L.....Rochester
Klontz, C. E., Jr.....Rochester
‡Knisely, R. M.....Rochester
‡Knutson, J. R. B.....Rochester
§Knutson, L. A.....Spring Grove
§Koelsche, G. A.....Rochester
Kreilkamp, B. L.....Rochester
§Krusen, F. H.....Rochester
Kurzweg, F. T.....Rochester
§Kvale, W. F.....Rochester
§Lake, C. F.....Rochester
§Lampert, E. G.....Rochester
Lander, H. H.....Rochester
Landry, R. M.....Rochester
§Lannin, J. C.....Mabel
Large, H. R.....Rochester
Larrabee, W. F., Jr.....Rochester
§Latterell, K. E.....Rochester
§Leary, W. V.....Rochester
Leavitt, M. D.....Rochester
LeBlanc, L. J.....Rochester
§Leddy, E. T.....Rochester
§Lee, J. B.....Rochester
‡Lemon, W. E.....Rochester
§Lemon, W. S.....Rochester
Levin, Louis.....Rochester
Lightfoot, Grace K.....Rochester
§Lillie, H. I.....Rochester
§Lillie, J. C.....Rochester
§Lipscomb, P. R.....Rochester
*†Lochead, D. C.....Rochester
Lofgren, K. A.....Rochester
§Logan, A. H.....Rochester
§Logan, G. B.....Rochester
Lombardi, A. A.....Rochester
Long, Mary.....Rochester
Loose, W. D.....Rochester
§Love, J. G.....Rochester
§Lovelady, S. B.....Rochester
§Lovshin, L. L.....Rochester
§Lowe, G. H.....Rochester
§Loyd, E. L.....Rochester
§Ludden, T. E.....Rochester
Luellen, T. J.....Rochester
§Lundy, J. S.....Rochester
§Lyman, R. W.....Rochester
Lynch, J. L.....Rochester
Lynch, R. C.....New Orleans, La.
§MacCarty, C. S.....Rochester
§†MacCarty, W. C.....Rochester
§Macdonald, I. D.....Rochester
§MacLean, A. R.....Rochester
‡MacMurtrie, W. J., Jr.....Bethesda, Md.
Macy, Dorothy.....Rochester
§Magath, T. B.....Rochester
§†Mann, F. C.....Rochester
§Marek, F. H.....Rochester
Margulies, Harold.....Rochester
Marr, G. E.....Rochester
Martens, T. G.....Rochester
Marvin, C. P.....Rochester
§Masson, D. M.....Rochester
§Masson, J. C.....Rochester
§Mayfield, L. H.....Rochester
§Mayo, C. W.....Rochester
§Maytum, C. K.....Rochester
McAnally, A. K.....Rochester
§McBean, J. B.....Rochester
McClellan, J. T.....Rochester
§McConahey, W. M., Jr.....Rochester
McCreight, W. G.....Rochester
§McDonald, J. R.....Rochester
§McElin, T. W.....Rochester
McEachern, C. G.....Rochester
§McGuff, P. E.....Pine Island
McKaig, C. B.....Rochester
McLaughlin, B. H.....Rochester
§McMahon, J. M.....Rochester
McMillan, J. T.....Rochester
§McQuarrie, H. B.....Rochester
McVicker, J. H.....Rochester
‡Meadows, J. A.....Rochester
§Merritt, W. A.....Rochester
Messler, J. D.....Rochester
§Meyer, A. C.....Rochester
Meyer, W. M.....Rochester
Meyerding, H. W.....Rochester
Meyers, W. C.....Rochester
Mezen, J. F.....Rochester
Millen, F. J.....Rochester
‡Miller, Sidney.....Rochester
‡Moersch, F. P.....Rochester
§Moersch, H. J.....Rochester
Montgomery, G. E.....Rochester
§Montgomery, Hamilton.....Rochester
Morgan, E. H.....Rochester
Morgan, J. L.....Rochester
§Morlock, C. G.....Rochester
§Morris, D. S.....Rochester
Morrow, J. R.....Rochester
Morton, R. J.....Rochester
Mulmed, E. I.....Rochester
‡Murphy, J. T.....Rochester
Murphy, M. E.....Rochester
‡Murray, R. A.....Rochester
Musgrove, J. E.....Rochester
Mussey, Mary E.....Rochester
§Mussey, R. D.....Rochester
Mussey, R. D., Jr.....Rochester
§Myers, T. T.....Rochester
‡Nay, R. M.....Preston
§Nehring, J. P.....Rochester
Neibling, H. A.....Rochester
§New, G. B.....Rochester
§Nichols, D. R.....Rochester
‡Nickeson, R. W.....Rochester
Nielsen, W. L.....Rochester
Nix, J. T.....Rochester
Nixon, R. R.....Rochester
Nordland, M. A.....Rochester
Norley, Theodore.....Caledonia
Norris, N. T.....Rochester
Norval, M. A.....Rochester
O'Brien, R. W.....Rochester
§Odel, H. M.....Rochester
Olcott, E. D.....Rochester
§O'Leary, P. A.....Rochester
§Olsen, A. M.....Pine Island
§Olson, E. A.....West Concord
§Olson, G. E.....Rochester
Olson, O. C.....Rochester
Olson, S. W.....Rochester
O'Neal, Ruth.....Houston
Onsgard, L. K.....Rochester
‡Osborn, J. E.....Rochester
Owen, A. C.....Rochester
§Paalman, R. J.....Rochester
Palmer, J. K.....Rochester
Parke, F. F.....Rochester
§Parker, H. L.....Rochester
§Parker, R. L.....Rochester
Parkhill, Edith M.....Rochester
Parkin, T. W.....Rochester
Paschall, Jack, Jr.....Rochester
Paulson, J. A.....Rochester
Pearson, C. C.....Rochester
Pearson, D. J.....Battle Creek, Mich.
Pease, Gertrude L.....Rochester
§Peltzer, W. E.....Rochester
§Pemberton, J. deJ.....Rochester
§Pender, J. W.....Rochester
Perkins, R. F.....Rochester
§Perry, E. L.....Rochester
‡Peters, G. A.....Rochester
§Petersen, M. C.....Rochester
§Peterson, J. R.....Rochester
Pfuetze, M. E.....Rochester
Phillips, S. K.....Rochester
§Pierce, P. P.....Rochester
§Piper, M. C.....Rochester
§Plummer, W. A.....Rochester
§Polley, H. F.....Rochester
§*Pollock, L. W.....Rochester
§Pool, T. L.....Rochester
§Poore, T. N.....Rochester
§Popp, W. C.....Rochester
§Powers, F. H.....Rochester
§Prangen, A. D.....Rochester
§Pratt, J. H.....Rochester
Pratt, W. C.....Rochester
Preston, F. W.....Rochester
‡Preston, L. F.....Rochester
§Prickman, L. E.....Rochester
§Priestley, J. T.....Rochester
§Pruitt, R. D.....Rochester
§Pugh, D. G.....Rochester
Pugh, P. F. H.....Rochester
Pyle, Marjorie M.....Rochester
§Ralston, D. E.....Rochester
Ramsey W. H. II.....Rochester
§Randall, L. M.....Rochester
Rang, R. H.....Rochester
§Rasmussen, W. C.....Rochester
Remington, J. H.....Rochester
Rice, Roberta G.....Rochester
§Risser, A. F.....Stewartville
§Rivers, A. B.....Rochester
§*Robertson, H. E.....Rochester
Robson, J. T.....Rochester
Rogers, J. D.....Rochester
§Rogne, W. G.....Spring Grove
Rosenbaum, E. E.....Rochester
Rosenow, E. C.....Cincinnati, Ohio
Rosenow, J. H.....Rochester
Rovelstad, R. A.....Rochester
§Rucker, C. W.....Rochester
Ruff, C. C.....Rochester
Rulison, E. T., Jr.....Rochester
‡Rushton, J. G.....Rochester
§Russ, F. H.....Rochester
Ryan, R. E.....Rochester
§Rynearson, E. H.....Rochester
Salassa, R. M.....Rochester
§Sanford, A. H.....Rochester
Sauer, W. G.....Rochester
§Sayre, G. P.....Kingsville, Tex.
Scales, J. R.....Rochester
Scanlon, R. L.....Rochester
Schafer, L. A.....Rochester
Scheifley, C. H.....Rochester
Schmidt, E. C.....Rochester
§Schmidt, H. W.....Rochester
‡Schmitt, G. F.....Rochester
‡Scholten, R. A.....Rochester
Seebach, Lydia M.....Rochester
Seiler, H. H.....Rochester
§Seldon, T. H.....Rochester
‡Sengpiel, G. W.....Rochester
§Seybold, W. D.....Rochester
§Shellito, J. G.....Rochester
Sheridan, Viola E.....Rochester
§Shick, R. M.....Rochester
‡Shonyo, E. S.....Rochester
Short, C. A., Jr.....Rochester
Shullenberger, C. C.....Rochester
Sicher, W. D.....Rochester
§Simonton, K. M.....Rochester
‡Skillern, P. G., Jr.....Rochester
Skroch, E. E.....Rochester
Slaughter, O. L.....Rochester
§Slocumb, C. H.....Rochester
Smith, F. H.....Rochester
§Smith, F. I.....Rochester
§Smith, F. R.....Rochester
§Smith, H. L.....Rochester
§Smith, L. A.....Rochester
§Smith, N. D.....Rochester
§Smith, O. O., Jr.....Rochester
Smith, R. S.....Rochester
§Snell, A. M.....Rochester
Snider, G. G.....Rochester
Spar, A. A.....Rochester
§Sprague, R. G.....Rochester
‡Spray, Paul.....Rochester
§Stark, D. B.....Rochester
‡Stark, F. M.....Rochester
‡Starks, W. O.....Rochester
Stein, B. R.....Rochester
§Stevens, J. E., Jr.....Rochester
§Stickney, J. M.....Rochester
§Stilwell, G. G.....Rochester
Stokes, G. D.....Rochester
Stout, H. A.....Rochester
Stover, Lee.....Rochester
§Stroebel, C. F., Jr.....Rochester
§Strong, M. L.....Rochester
Stuart, R. L.....Rochester
†Sutherland, C. G.....Rochester
§Svien, H. J.....Rochester
‡Taylor, J. C.....Rochester
Thomas, J. F.....Rochester
§Thompson, G. J.....Rochester
Thorson, S. B.....Rochester
Tice, G. I.....Rochester
‡Tice, W. A.....Rochester
§Tillisch, J. H.....Rochester
Tomlin, H. M.....Rochester

Tompkins, S. F.....Rochester
Tosseland, N. E.....Rochester
§Tuohy, E. B.....Rochester
Turner, J. L.....Rochester

Uhrich, E. C.....Rochester
§Uihlein, Alfred.....Rochester
§Underdahl, L. O.....Rochester
Upshaw, Bette Y.....Rochester
‡Urban, D. A.....Rochester

§Van Cleve, H. P., Jr. ....Rochester
Van Herik, Martin.....Rochester
Varney, J. H.....Rochester
§Vaughan, L. M.....Rochester
§Vaughn, L. D.....Rochester
Vigran, Myron.....Rochester

§Wagener, H. P.....Rochester
§Wakefield, E. G.....Rochester
Walsh, A. C.....Rochester
§Walsh, M. N.....Rochester
§Walters, Waltman.....Rochester
‡Ward, B. H.....Rochester
Warren,, W. B.....Rochester
Washko, P. J.....Rochester
§Watkins, C. H.....Rochester
Watkins, D. H.....Rochester
§Waugh, J. M.....Rochester
Webb, Margaret A.....Rochester
§Weber, H. M.....Rochester
§Weed, L. A.....Rochester
§Weir, J. F.....Rochester
Weisman, S. J.....Rochester
Weismann, R. E.....Rochester
§Wellner, T. O.....Rochester
Wells, G. R.....Rochester
§Wells, J. J.....Rochester
§Westrup, J. E.....Rochester
White, E. F., Jr.....Rochester
White, N. K.....Rochester
Whitehouse, F. R.....Rochester
Whitesell, F. B.....Rochester
§Wilder, R. M.....Rochester
§Williams, H. L., Jr.....Rochester
§Williams, R. R., Jr.....Rochester
Williams, R. V.....Rushford
§Willius, F. A.....Rochester
§Wilmer, H. A.....Rochester
Wilson, G. T.....Rochester
Wilson, J. M.....Rochester
Wilson, J. W.....Rochester
§Wilson, R. V.....Rochester
§Winchester, W. W.....Rochester
§Wise, R. W. E.....Rochester
Wold, L. E.....Rochester
§Wollaeger, E. E.....Rochester
§Woltman, H. W.....Rochester
§Wood, H. G.....Rochester
‡Wood, W. D.....Rochester
Woodruff, C. W.....Chatfield
Wozencraft, J. P.....Rochester
§Young, H. H.....Rochester
Zaslow, Jerry.....Rochester

PARK REGION DISTRICT AND COUNTY MEDICAL SOCIETY

Douglas, Grant, Otter Tail and Wilkin Counties
Regular meetings quarterly
Annual meeting, December
Number of Members: 58

President
Sather, E. R.....Alexandria
Secretary
Baker, C. E.....Herman

§Arndt, H. W.....Detroit Lakes
§Baker, A. C.....Fergus Falls
Baker, C. E.....Herman
§Baker, N. H.....Fergus Falls
Baker, Jeannette L. ....Fergus Falls
Bergquist, K. E.....Battle Lake
Bigler, I. E.....Perham
§Blakey, A. R.....Osakis
§Boline, C. A.....Battle Lake
§Boyd, L. M.....Alexandria
§Burnap, W. L.....Fergus Falls
Cain, J. H.....Hoffman
Carlson, C. E.....Alexandria
Clifford, G. W.....Alexandria
§Combacker, L. C.....Fergus Falls
§Drought, W. W.....Fergus Falls
Esser, John.....Perham
§Estrem, C. O.....Fergus Falls
§Estrem, R. D.....Fergus Falls
Hanson, E. C.....New York Mills
§Haskell, A. D.....Alexandria
§Heiberg, E. A.....Fergus Falls
§Helseth, H. K.....Fergus Falls
Jacobs, G. C.....Fergus Falls
§Jacobson, C. W.....Breckenridge
Johnson, O. V.....Fergus Falls
§Kierland, P. E.....Alexandria
Leibold, H. H.....Parkers Prairie
§Lewis, A. J.....Henning
Love, F. A.....Carlos
§Lund, C. J. T.....Fergus Falls
Miller, W. A.....New York Mills
§Mouritsen, G. J.....Fergus Falls
§Naegeli, F. A.....Fergus Falls
Nelson, R. A.....Fergus Falls
§Nelson, W. O. B.....Fergus Falls
O'Brien, Louis T.....Breckenridge
Ostergaard, Erling.....Fergus Falls
Parson, Lillian B.....Elbow Lake
Parson, L. R.....Elbow Lake
Patterson, W. L.....Fergus Falls
§Paulson, E. C.....Elbow Lake
Paulson, G. S.....Evansville
Paulson, T. S.....Fergus Falls
Randall, A. M.....Ashby
Reeve, E. T.....Elbow Lake
§Satersmoen, Theodore..Pelican Rapids
§Sather, E. R.....Alexandria
§Schamber, W. F.....Parkers Prairie
§Schleinitz, F. B.....Battle Lake
§Serkland, J. C.....Rothsay
§Stemsrud, H. L.....Alexandria
Sutton, H. R.....Hoffman
§Tanquist, E. J.....Alexandria
§Thompson, H. B.....Fergus Falls
Warner, J. J.....Perham
§Wasson, L. F.....Alexandria
Wray, W. E.....Campbell

RAMSEY COUNTY MEDICAL SOCIETY

Regular meetings, last Monday in every month excepting June, July, August
Annual meeting, last Monday in January
Number of Members: 407

President
Culligan, J. M.....St. Paul
Secretary
Hilger, L. D.....St. Paul

Adair, A. F., Jr.....St. Paul
Adler, B. C.....St. Paul
§Ahrens, A. E.....St. Paul
§Ahrens, A. H.....St. Paul
Alden, J. F.....St. Paul
*†Alexander, F. H.....St. Paul
§Arnquist, A. S.....St. Paul
§Arny, F. P.....St. Paul
§Arzt, P. K.....St. Paul
§Aurelius, J. R.....St. Paul
§Ausman, C. F.....St. Paul
§Bacon, D. K.....St. Paul
§†Bacon, L. C.....St. Paul
§Balcome, M. M.....St. Paul
Barnett, J. M.....St. Paul
Barsness, Nellie O. N.....St. Paul
§Barry, L. W.....St. Paul
Barton, John C.....St. Paul
§†Beals, Hugh.....St. Paul
§Beech, R. H.....St. Paul
§Beek, H. O.....St. Paul
Beer, J. J.....St. Paul
§Bell, C. C.....St. Paul
Benepe, J. L.....St. Paul
Bennion, P. H.....St. Paul
§Bentley, N. P.....St. Paul
Bernstein, W. C.....St. Paul
§Bicek, J. F.....St. Paul
Binger, H. E.....St. Paul
Black, E. J.....St. Paul
§Bock, R. A.....St. Paul
Boeckmann, Egil.....St. Paul
§Bolender, H. L.....St. Paul
Borg, J. F.....St. Paul
§Bouma, L. R.....St. Paul
§Brand, G. D.....St. Paul
Bray, E. R.....St. Paul
§Briggs, J. F.....St. Paul
§Broadie, T. E.....St. Paul
§Brodie, W. D.....St. Paul
Brown, J. C.....St. Paul
Bulinski, T. J.....St. Paul
§Burch, E. P.....St. Paul
§Burch, F. E.....St. Paul
Burlingame, David A.....St. Paul
§Burns, R. M.....St. Paul
Burton, C. G.....St. Paul
§Busher, H. H.....St. Paul
§Cain, C. L.....St. Paul
Callahan, F. F.....St. Paul
§Carley, W. A.....St. Paul
§Carroll, W. C.....St. Paul
§Chadbourn, C. R.....St. Paul
§Chatterton, C. C.....St. Paul
§Christiansen, A.....St. Paul
*†Christison, J. T.....St. Paul
§Clark, H. B., Jr.....St. Paul
Cochrane, B. B.....St. Paul
Coddon, W. D.....St. Paul
§Colby, W. L.....St. Paul
§Cole, W. H.....St. Paul
†Collie, H. G.....St. Paul
Colvin, A. R.....St. Paul
Connolly, C. J.....St. Paul
§Connor, C. E.....St. Paul
§Cook, C. K.....St. Paul
§Cooper, C. C.....St. Paul
§Countryman, R. S.....St. Paul
†Cowern, E. W.....No. St. Paul
§Critchfield, L. R.....St. Paul
Crombie, F. J.....No. St. Paul
Crump, J. W.....St. Paul
§Culligan, J. M.....St. Paul
§Culver, J. G.....St. Paul
§Dack, L. G.....St. Paul
†Daugherty, E. B..Marine-on-St. Croix
§Davis, E. V.....St. Paul
*Davis, William.....St. Paul
Decker, C. H.....St. Paul
§*DeCourcy, D. M.....St. Paul
§Dedolph, Karl.....St. Paul
§Derauf, B. I.....St. Paul
Deters, D. C.....St. Paul
§Dickson, T. H.....St. Paul
§*Dittman, G. C.....St. Paul
Donohue, P. F.....St. Paul
Dovre, C. M.....St. Paul
§Drake, C. B.....St. Paul
§Dunn, J. N.....St. Paul
§Earl, G. A.....St. Paul
§Earl, J. R.....St. Paul
Earl, Robert.....St. Paul
§Edlund, Gustaf.....St. Paul
Edwards, J. W.....St. Paul
§Edwards, T. J.....St. Paul
Eginton, C. T.....St. Paul
Ely, O. S.....So. St. Paul
§Emerson, E. C.....St. Paul
§Endress, E. K.....St. Paul
Enroth, O. E.....St. Paul
Ernest, G. C. H.....So. St. Paul
Ersfeld, Murray P.....St. Paul
†Eshelby, E. C.....St. Paul
Evert, John A.....St. Paul
†Fahey, E. W.....St. Paul
§Ferguson, J. C.....St. Paul
§Fessler, H. H.....St. Paul
Fink, D. L.....St. Paul
Fisher, Isadore.....St. Paul
§Flanagan, H. F.....St. Paul
Flink, E. B.....St. Paul
§Fogarty, C. W.....St. Paul
§Fogelberg, E. J.....St. Paul
§Foley, F. E. B.....St. Paul
Freeman, C. D.....St. Paul
Freidman, L. L.....St. Paul
Fritz, W. L.....St. Paul
§Froats, C. W.....St. Paul
Frost, Russell H.....St. Paul
§Garbrecht, A. W.....St. Paul
Gardiner, D. G.....St. Paul
§Gardner, W. P.....St. Paul
Garrow, D. M.....St. Paul
Garthe, J. J.....St. Paul
§Geer, E. K.....St. Paul
§Gehlen, J. N.....St. Paul
§Geist, G. A.....St. Paul
§Ghent, Harry.....St. Paul
Gibbs, E. C.....St. Paul
Gilfillan, J. S.....St. Paul
Gilkey, S. E.....St. Paul
Gillespie, D. R.....St. Paul
†Ginsberg, William.....St. Paul
§Gjerde, W. P.....St. Paul
Gleason, W. A.....St. Paul
§†Goltz, E. V.....St. Paul

Grant, H. W.....St. Paul
§Gratzek, Thomas.....St. Paul
§Grau, R. K.....St. Paul
§Gruenhagen, A. P.....St. Paul
Gullingsrud, M. J. O.....Oregon
†Hall, A. R.....St. Paul
Hall, H. H.....St. Paul
§Hammes, E. M.....St. Paul
Hammond, J. F.....St. Paul
§Hanson, H. B.....St. Paul
§Harmon, G. E.....St. Paul
§Hartfiel, W. F.....St. Paul
Hartig, Marjorie.....St. Paul
§Hartley, E. C.....St. Paul
§Hassett, M. F.....St. Paul
§Hauser, V. P.....St. Paul
§Hayes, A. F.....St. Paul
§Heck, W. W.....St. Paul
Hedenstrom, F. G.....St. Paul
Henderson, A. J. G.....St. Paul
Hengstler, W. H.....St. Paul
§Hensel, C. N.....St. Paul
Herman, S. M.....St. Paul
§Heron, R. C.....St. Paul
§Herrmann, E. T.....St. Paul
Hertz, M. J.....St. Paul
§Hilger, A. W.....St. Paul
†Hilger, D. D.....St. Paul
§Hilger, J. A.....St. Paul
§Hilger, L. D.....St. Paul
§Hilger, L. A.....St. Paul
Hiniker, L. P.....St. Paul
§Hochfilzer, J. J.....St. Paul
§Hoff, Alfred.....St. Paul
Holcomb, O. W.....St. Paul
Hollinshead, W. H.....St. Paul
§Holmen, R. W.....St. Paul
§Holt, J. E.....St. Paul
Hopkins, G. W.....St. Paul
Howard, M. A.....St. Paul
Howard, W. S.....St. Paul
§Hullsiek, H. E.....St. Paul
§Hullsiek, R. B.....St. Paul
Hultgen, W. J.....St. Paul
Hurwitz, M. M.....St. Paul
§Ide, A. W.....St. Paul
Ikeda, Kano.....St. Paul
Ingerson, C. A.....St. Paul
Janssen, M. E.....St. Paul
Jesion, J. W.....St. Paul
§Johanson, W. G.....St. Paul
§Johnson, A. M.....St. Paul
Johnson, C. E.....St. Paul
Johnson, J. A.....St. Paul
Jones, E. M.....St. Paul
§Kamman, G. R.....St. Paul
Kaplan, D. H.....St. Paul
Karon, I. M.....St. Paul
§Kasper, E. M.....St. Paul
Katzovitz, Hyman.....St. Paul
Keefe, R. E.....St. Paul
§Kelly, J. V.....St. Paul
Kelly, P. H.....St. Paul
Kelsey, C. M.....St. Paul
Kendall, R. F.....St. Paul
§Kenefick, E. V.....St. Paul
§Kennedy, W. A.....St. Paul
Kenyon, T. J.....St. Paul
§Kesting, Herman.....St. Paul
King, G. L.....St. Paul
Kleifgen, G. V. H.....St. Paul
§Klein, H. N.....St. Paul
§†Knauff, M. K.....St. Paul
Knutson, G. E.....St. Paul
§Kugler, A. A.....St. Paul
Kuske, A. W.....St. Paul
Kvitrud, Gilbert.....St. Paul
§Lannin, B. G.....St. Paul
§Larsen, C. L.....St. Paul
Larson, Eva-Jane.....St. Paul
Larson, J. T.....St. Paul
Lauer, D. J.....Pittsburgh, Pa.
Lax, M. H.....St. Paul
§Leahy, Bartholomew.....St. Paul
§Leavenworth, R. O.....St. Paul
Leick, R. M.....St. Paul
§Leitch, Archibald.....St. Paul
§Lepak, J. A.....St. Paul
†Lerche, William.....Cable, Wis.
§Leven, N. L.....St. Paul
Leverenz, C. W.....St. Paul
Levin, Bert.....St. Paul
Levitt, G. X.....St. Paul
§Lick, C. L.....St. Paul
Lien, R. J.....St. Paul
§Lightbourn, E. L.....St. Paul
§Lilleberg, N. J.....St. Paul
Lippman, H. S.....St. Paul
*†Little, W. J.....St. Paul
§Loken, S. M.....St. Paul
Lowe, E. R.....So. St. Paul
Lowe, T. A.....So. St. Paul
§Lundholm, A. M.....St. Paul
§Lynch, F. W.....St. Paul
McAdams, J. B.....St. Paul
McCain, D. L.....St. Paul
McCarthy, J. J.....St. Paul
McCarthy, W. R.....St. Paul
McClanahan, J. H.....White Bear
McClanahan, T. S.....White Bear
McCloud, C. N.....St. Paul
§McEwan, Alexander.....St. Paul
†McLaren, Jennette M.....Minneapolis
§Madden, J. F.....St. Paul
§Madland, Robert S.....St. Paul
Maertz, W. F.....St. Paul
Malerich, J. A.....St. Paul
Marks, R. W.....St. Paul
Martin, D. L.....St. Paul
§Martineau, J. L.....St. Paul
§Meade, J. R.....St. Paul
§Mears, B. J.....St. Paul
§Medelman, J. P.....St. Paul
Melancon, J. F.....St. Paul
§Meyerding, E. A.....St. Paul
§Moga, J. A.....St. Paul
Molander, H. A.....St. Paul
Moquin, Marie A.....St. Paul
Moriarty, Berenice.....St. Paul
Moriarty, Cecile R.....St. Paul
Muller, A. E.....St. Paul
§Muller, R. T.....St. Paul
Naegeli, A. E.....St. Paul
§Nash, L. A.....St. Paul
§Nelson, L. A.....St. Paul
§Nichols, A. E.....St. Paul
§Noble, J. F.....St. Paul
§Noble, J. L.....St. Paul
Nuebel, C. J.....St. Paul
Nye, Katherine A.....St. Paul
Nye, Lillian L.....St. Paul
O'Brien, W. M.....St. Paul
O'Connor, L. J.....St. Paul
Oerting, Harry.....St. Paul
§Ogden, Warner.....St. Paul
§Ohage, Justus Jr.....St. Paul
O'Kane, T. W.....St. Paul
Olsen, R. L.....St. Paul
Olson, C. A.....St. Paul
§O'Reilley, B. E.....St. Paul
§Ostergren, E. W.....St. Paul
§Ouellette, A. J.....St. Paul
§Pearson, F. R.....St. Paul
Pearson, M. M.....St. Paul
Pedersen, A. H.....St. Paul
§Perry, C. G.....St. Paul
Peterson, D. B.....St. Paul
§Peterson, H. O.....St. Paul
§Peterson, J. L. E.....St. Paul
§Plondke, F. J.....St. Paul
§Prendergast, H. J.....St. Paul
Quattlebaum, F. W.....St Paul
Radabaugh, R. C.....Hastings
Ralph, J. R.....St. Paul
†Ramsey, W. R.....St. Paul
Rasmussen, R. C.....St. Paul
Rea, C. E.....St. Paul
§Richards, E. T. F.....St. Paul
§Richardson, H. E.....St. Paul
Richardson, R. J.....St. Paul
Rick, P. F. W.....St. Paul
§Ritchie, W. P.....St. Paul
§Ritt, A. E.....St. Paul
§Rogers, S. F.....St. Paul
Rolig, D. H.....St. Paul
§Rosenbladt, Louis.....Tacoma, Wash.
Rosenholtz, Burton.....St. Paul
§Rosenthal, Robert.....St. Paul
§Roth, G. C.....St. Paul
Rothschild, H. J.....St. Paul
§Roy, P. C.....St. Paul
§†Ruhberg, G. N.....St. Paul
Ruona, Martin A.....St. Paul
Rutherford, W. C.....Nisswa
Ryan, James D.....St. Paul
§Ryan, J. J.....St. Paul
§Ryan, J. M.....St. Paul
§Ryan, M. E.....St. Paul
§Sarnecki, M. M.....St. Paul
Satterlund, V. L.....St. Paul
§Savage, F. J.....St. Paul
Schmidtke, R. L.....St. Paul
Schoch, R. B. J.....St. Paul
§Schons, Edward.....St. Paul
Schroeckenstein, H.F.....St. Paul
§†Schuldt, F. C.....St. Paul
§Schulze, A. G.....St. Paul
§Schwyzer, H. C.....St. Paul
§Scott, E. E.....St. Paul
Selvig, H. S.....St. Paul
†Senkler, G. E.....St. Paul
§Setzer, H. J.....St. Paul
Shannon, W. R.....St. Paul
†Shellman, J. L.....Pacific Palisades, Cal.
§Shimonek, S. W.....St. Paul
Short, Jacob.....St. Paul
Siegel, Clarence.....St. Paul
§Simons, L. T.....St. Paul
Singer, B. J.....St. Paul
§†Skinner, H. O.....St. Paul
§Smisek, E. A.....St. Paul
§Smith, V. D. E.....St. Paul
§Snyder, G. W.....St. Paul
§Sohlberg, O. I.....St. Paul
§Sommers, Ben.....St. Paul
§Sorem, M. B.....St. Paul
§Souster, B. B.....St. Paul
§Sprafka, J. M.....St. Paul
§Steinberg, C. L.....St. Paul
§Sterner, E. G.....St. Paul
§Sterner, E. R.....St. Paul
§Sterner, O. W.....St. Paul
Stewart, Alexander.....St. Paul
§*Stinnette, S. E.....St. Paul
§Stolpestad, A. H.....St. Paul
§Stolpestad, H. L.....St. Paul
§Strate, G. E.....St. Paul
Straus, M. L.....St. Paul
Strem, E. L.....St. Paul
Sturley, Rodney F.....St. Paul
Swanson, J. A.....St. Paul
§Swendson, J. J.....St. Paul
§Teisberg, C. B.....St. Paul
Teisberg, J. E.....St. Paul
Thompson, F. A.....St. Paul
Thoreson, M. C. Bernice..So. St. Paul
Tifft, C. R.....St. Paul
Tracht, R. R.....St. Paul
Travis, J. S.....St. Paul
§Tregilgas, H. R.....So. St. Paul
Varco, R. L.....St. Paul
Veirs, Dean.....St. Paul
Veirs, Ruby J. S.....St. Paul
§Venables, A. E.....St. Paul
§Von der Weyer, W. H.....St. Paul
§Waas, C. W.....St. Paul
§Walker, A. E.....St. Paul
§Walter, C. W.....St. Paul
†Ward, P. D.....St. Paul
Warren, C. A.....St. Paul
Watz, C. E.....St. Paul
§Webber, F. L.....St. Paul
§Weis, B. A.....St. Paul
Weisberg, Maurice.....St. Paul
§Wenzel, G. P.....St. Paul
Werner, O. S.....Cambridge
†Wheeler, M. W.....St. Paul
Whitacre, J. C.....St. Paul
*Whitemore, F. W.....St. Paul
Williams, A. B.....St. Paul
§Williams, C. K.....St. Paul
§Williams, J. A.....St. Paul
§Wilson, J. A.....St. Paul
§Wilson, J. V.....St. Paul
Winnick, J. B.....St. Paul
§Wold, K. C.....St. Paul
Wolff, H. J.....St. Paul
Wolkoff, H. J.....St. Paul
Word, H. L.....St. Paul
Youngren, E. R.....St. Paul
Zachman, L. L.....St. Paul
§Zimmermann, H. B.....St. Paul

RED RIVER VALLEY MEDICAL SOCIETY

Kittson, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake and Roseau Counties

Regular meetings quarterly
Annual meeting, December
Number of Members: 57

President
Uhley, C. G.....Crookston
Secretary
Sather, R. O.....Crookston

§Adkins, C. M.....Thief River Falls
Anderson, J. T.....Red Lake Falls
Anderson, W. E.....Clearbrook
Bechtel, M. J.....Warren
§Behr, O. K.....Crookston
Berge, D. O.....Roseau
Berlin, A. S.....Hallock
§Bertelsen, O. L.....Crookston

Biedermann, Jacob..Thief River Falls
§Bratrud, Edward....Thief River Falls
§Bratrud, T. E.....Thief River Falls
Brink, A. A.....Baudette
§Brown, L. L.....Crookston
Carlson, A. E.....Warren
Covey, K. W.....Mahnomen
Delmore, John L. Jr.....Roseau
§Delmore, John L., Sr.....Roseau
Delmore, R. J.....Roseau
Dodds, W. C.....Thief River Falls
§Erickson, Eskil.....Halstad
§Henney, W. H.....McIntosh
Hollands, W. H.....Fisher
Holmstrom, C. H.....Warren
Janecky, A. G.....Warroad
Johnson, H. C.....Thief River Falls
Johnson, R. E.....Crookston
Kirk, G. P.....East Grand Forks
Knutson, G. A.....Hallock
§Kostick, W. R.....Fertile
§Loken, Theodore.....Ada
§Lynde, O. G.....Thief River Falls
§Mellby, O. F.....Thief River Falls
§Mercil, W. F.....Crookston
Morley, G. A.....Crookston
Nelson, A. S.....Thief River Falls
Nelson, H. E.....Crookston
Nietfeld, A. D.....Warren
§Norman, J. F.....Crookston
§Oppegaard, C. L.....Crookston
§Oppegaard, M. O.....Crookston
Parsons, J. G.....Crookston
Pearson, L. O.....Warroad
§Reff, A. R.....Crookston
Rydland, A. D. .....Crookston
†Sather, Allen.....Fosston
Sather, G. A.....Fosston
§Sather, R. O.....Crookston
§Shedlow, Abraham.....Fosston
Skoog-Smith, A. W.....Mahnomen
§Starekow, M. D. ..Thief River Falls
Stensgaard, K. L....Thief River Falls
Stevens, John.....Gonvick
§Torgerson, W. B.....Oklee
§Uhley, C. G.....Crookston
Van Rooy, G. T....Thief River Falls
Watson, R. M.....Thief River Falls
§Wiltrout, I. G.....Oslo
Zorn, E. L.....Erskine

REDWOOD-BROWN COUNTY MEDICAL SOCIETY

Regular meetings quarterly
Annual meeting, May
Number of Members: 36

President
Fritsche, C. J.....New Ulm
Secretary
Fesenmaier, O. B.....New Ulm

Anderson, D. C. .....Lamberton
§Benton, P. C.....Gibbon
Bergman, O. B.....St. James
Bratrude, E. J.....St. James
Bregel, F. L.....St. James
§Cairns, R. J.....Redwood Falls
§Domeier, L. H. .....New Ulm
§Dubbe, F. H.....New Ulm
§Dysterheft, A. F.....Gaylord
§Esser, O. J. .....New Ulm
§Fesenmaier, O. B.....New Ulm
§Fritsche, Albert.....New Ulm
§Fritsche, C. J.....New Ulm
§Fritsche, T. R.....New Ulm
§Gibbons, F. C.....Comfrey
§Goblirsch, A. P.....Sleepy Eye
§Hammermeister, T. F.....New Ulm
§Hovde, Rolf.....Winthrop
§Keithahn, E. E.....Sleepy Eye
§Kruzick, S. J.....Sleepy Eye
§Kusske, A. L.....New Ulm
Mortensbak, H. E..Great Falls, Mont.
§Nelson, Glen .....Fairfax
Nuessle, W. G.....Springfield
§Penk, E. L. .....Springfield
Peterson, R. A.....Vesta
§Reineke, G. F.....New Ulm
§Saffert, C. A.....New Ulm
§Schroeppel, J. E.....Winthrop
§Seifert, O. J.....New Ulm
Senescall, C. R.....Enumclaw, Wash.
§Vogel, H. A. L.....New Ulm
§Vogel, J. H.....New Ulm
§Weiser, G. B.....New Ulm
§Wohlrabe, E. J.....Springfield

RENVILLE COUNTY MEDICAL SOCIETY

Regular meetings, second Tuesday of month
Annual meeting, November
Number of Members: 21

President
Erickson, R. E.....Hector
Secretary
Johnson, H. E.....Bird Island

§Adams, R. C.....Bird Island
§Billings, R. E.....Franklin
§Brand, W. A.....Redwood Falls
Bushard, W. J.....Minneapolis
§Cosgriff, J. A.....Olivia
Ceplecha, S. F.....Redwood Falls
§Dordal, J. .....Sacred Heart
§Erickson, R. E.....Hector
§Fawcett, A. M.....Renville
Flinn, T. E.....Redwood Falls
§Gaines, E. C.....Buffalo Lake
§Hinz, W. T.....Bird Island
§Johnson, H. E.....Bird Island
Johnson, O. H.....Redwood Falls
§Johnson, W. E.....Morgan
§Leitschuh, Henry .....Sanborn
Lenz, J. R.....Morton
§Mesker, G. H.....Cambridge
§Passer, A. A.....Olivia
Potthoff, C. J.....Washington, D. C.
Priesinger, J. W.....Renville

RICE COUNTY MEDICAL SOCIETY

Regular meetings, at call
Annual meeting, June
Number of Members: 27

President
Engberg, E. J.....Faribault
Secretary
Stevenson, F. W.....Faribault

§Dungay, N. S.....Northfield
§Engberg, E. J.....Faribault
Francis, D. W.....Morristown
§Hanson, A. M.....Faribault
§Hanson, J. W.....Northfield
Huxley, F. R.....Faribault
Kennedy, G. L.....Faribault
§Lende, Norman.....Faribault
Lexa, F. J.....Lonsdale
McKeon, J. O.....Faribault
§Mears, R. F.....Northfield
Meyer, F. C.....Kenyon
Meyer, P. F.....Faribault
§Moses, Joseph Jr.....Northfield
Moses, R. R.....Kenyon
Nielsen, A. M.....Northfield
§Nuetzman, A. W.....Faribault
§Robilliard, C. M.....Faribault
Rohrer, C. A.....Waterville
Rumpf, C. W.....Faribault
†Rumpf, W. H.....Faribault
§Stevenson, F. W.....Faribault
Street, Bernard.....Northfield
§Studer, D. J.....Faribault
Traeger, C. A.....Faribault
§Weaver, P. H.....Faribault
§Wilson, W. E.....Northfield

ST. LOUIS COUNTY MEDICAL SOCIETY

Carlton, Cook, Itasca, Lake and St. Louis Counties
Regular meetings, second Thursday every month except July and August
Annual meeting, December
Number of Members: 246

President
Wheeler, D. W.....Duluth
Secretary
Bagley, Elizabeth C.....Duluth

§Abraham, A. L.....Duluth
§Adams, B. S.....Hibbing
Addy, E. R.....Gilbert
Anderson, C. L.....Ely
Anderson, G. A.....Hibbing
Anderson, H. R.....Deer River
§Arhelger, S. W.....Duluth
§Arko, J. L.....Hibbing
§Armstrong, E. L.....Duluth
§Athens, A. G.....Duluth
†Ayres, G. T.....Phoenix, Ariz.
Bachnik, F. W.....Hibbing
§Backus, R. W.....Nopeming
§Bagley, C. M.....Duluth
Bagley, Elizabeth C.....Duluth
Bagley, W. R.....Duluth
Baich, V. M.....Bovey
§Bakkila, H. E.....Duluth
§Bardon, Richard.....Duluth
§Barker, J. D.....Duluth
Barney, L. A.....Duluth
§Barrett, E. E.....Duluth
§Becker, F. T.....Duluth
Bepko, Marie K.....Cloquet
Berdez, G. L.....Duluth
§Bianco, A. J.....Duluth
†Binet, H. E.....Grand Rapids
Blackmore, S. C.....Biwabik
*Blakely, C. C.....Barnum
Bolz, J. A.....Grand Rapids
Bowman, P. G.....Duluth
Booren, J. C.....Duluth
Bowen, R. L.....Hibbing
§Boyer, S. H., Jr.....Duluth
Boyer, S. H., Sr.....Duluth
§*Braverman, N. J.....Duluth
Bray, K. E. .....New Orleans, La.
§Bray, P. N.....Duluth
Bray, R. B.....Biwabik
§Buckley, R. P.....Duluth
§Butler, J. K.....Carlton
Cantwell, W. F....International Falls
Carstens, C. F.....Hibbing
Chapman, T. L.....Duluth
Chermak, F. G....International Falls
§Christenson, C. H.....Duluth
§Clark, I. T.....Duluth
Clarke, E. T.....Buhl
§Cole, Frank.....Duluth
Collins, A. N.....Duluth
†Collins, H. C.....Duluth
§Coventry, W. A.....Duluth
§Coventry, W. D.....Duluth
Cunningham, C. B.....Virginia
Dahlin, I. T.....Aurora
§Davies, R. J.....
Richland Highlands, Wash.
§Dickson, F. H., Jr.....Proctor
§Dittrich, R. J.....Duluth
§Doolittle, L. E.....Duluth
Doyle, G. C.....Duluth
§Eckman, P. F.....Duluth
§Eckman, R. J.....Duluth
§Ekblad, J. W.....Duluth

§Elias, F. J.....Duluth
§Emanual, K. W.....Duluth
Eppard, R. M.....Cloquet
Erskine, G. M.....Grand Rapids
§Estrem, T. A.....Hibbing
Ewens, H. B.....Virginia
§Fawcett, K. R.....Duluth
Fearing, J. E.....Virginia
§Fellows, M. F.....Duluth
Ferrell, C. R.....Grand Rapids
§Fischer, M. McC.....Duluth
Fisketti, Henry.....Duluth
Flynn, B. F.....Hibbing
§Fredericks, M. G.....Duluth
Gendron, J. F.....Grand Rapids
§Gillespie, M. G.....Duluth
§Goldish, D. R.....Duluth
§Goodman, C. E.....Virginia
§Gowan, L. R.....Duluth
Graham, A. W.....Chisholm
§Grahek, J. P.....Ely
§Graves, W. N.....Duluth
Grinley, A. V.....Grand Rapids
Haney, C. L.....Duluth
§Hanson, E. O.....Cloquet
§Harris, C. N.....Hibbing
Hartman, Jack.....Soudan
Hatch, W. E.....Duluth
Hathaway, S. J.....Tacoma, Wash.
Hayes, M. F.....Nashwauk
§Hedberg, G. A.....Nopeming
Heiam, W. C.....Cook
§Hilding, A. C.....Duluth
Hill, F. E.....Duluth
Hirschboeck, F. J.....Duluth
§Hoff, H. O.....Duluth
§Houkom, S. S.....Duluth
Hutchinson, Henry.....Moose Lake
Jacobson, Clarence.....Chisholm
§Jacobson, F. C.....Duluth
§Jensen, T. J.....Duluth
§Jeronimus, H. J.....Duluth
§Jessico, C. M.....Duluth
§Joffe, H. H.....Duluth
§Johnson, K. E.....Duluth
Johnsrud, L. W.....Chisholm
Jolin, F. M.....Bovey
Kelley, K. J.....Bigfork
Kemp, M. W.....Alton, Ill.
*Kingsbury, E. M.....Moose Lake
§Klein, Harry.....Duluth
§Knapp, F. N.....Duluth
§Knoll, W. V.....Duluth
§Kohlbry, C. O.....Duluth
Kotchevar, F. R.....Eveleth
†Kozberg, Oscar.....Moose Lake
§Krueger, V. R.....Nopeming
§La Bree, R. H.....Duluth
§Laird, A. T.....Duluth
Lenont, C. B.....Virginia
Lepak, F. J.....Duluth
§Litman, S. N.....Duluth
Loofbourrow, E. H.....Keewatin
§Luth, D. V.....Duluth
†McCoy, Mary K.....Duluth
McDonald, A. L.....Duluth
§McHaffie, O. L.....Duluth
McKenna, M. J.....Grand Rapids
McLane, W. O.....Duluth
McLeod, J. L.....Grand Rapids
§McNutt, J. R.....Duluth
§Macfarlane, P. H.....Chisholm
§MacRae, G. C.....Duluth
§Magney, F. H.....Duluth
§Magraw, R. M.....St. Paul
§Malmstrom, J. A.....Virginia
§Manley, J. R.....Duluth
†Marcley, W. J.....Minneapolis
Marshall, Helen S. ....Statesan, Wis.
§Martin, W. C.....Duluth
§Mayne, R. M.....Duluth
Mead, C. H.....Duluth
§Merriman, L. L.....Duluth
Meyer, J. O.....Grand Rapids
Minckler, J. E.....St. Paul
Miners, G. A.....Deer River
§Minty, E. W.....Duluth
§Moe, R. J.....Duluth
Moe, Thomas.....Moose Lake
Mollers, T. P.....Mountain Iron
Monroe, P. B.....Cloquet
Monserud, N. O.....Cloquet
More, C. W.....Eveleth
§Morsman, L. W.....Hibbing
§Mueller, R. F.....Two Harbors
Mueller, Selma C.....Duluth
Murray, R. A.....Hibbing
Neff, W. S.....Virginia
Nelson, E. H.....Chisholm
Nelson, L. S.....Hibbing
§Nelson, R. L.....Duluth
§Nicholson, M. A.....Duluth
Norberg, C. E.....Cloquet
§Nutting, R. E.....Duluth
§Olson, A. E.....Duluth
Olson, A. O.....Duluth
Palmer, H. A.....Blackduck
†Parker, O. W.....Duluth
Parker, W. H.....Chisholm
§Parson, E. I.....Duluth
Pasek, A. W.....Cloquet
§Patch, O. B.....Duluth
Pearsall, R. P.....Virginia
§Pederson, R. C.....Duluth
Pennie, D. F.....Duluth
Peterson, E. N.....Virginia
Peterson, J. H.....Minneapolis
§Pfuetze, K. H.....Cannon Falls
Pollard, W. H., Jr.....Duluth
§Power, J. E.....Duluth
Puumala, R. H.....Cloquet
Raadquist, C. S.....Hibbing
Raihala, John.....Virginia
§Raiter, R. F.....Cloquet
Reed, Paul.....Virginia
†Robinson, J. M.....Goshen, N. Y.
Rokala, H. E.....Virginia
§†Rood, D. C.....Duluth
Rosenfield, A. B.....Minneapolis
Rowe, O. W.....Duluth
§Rowles, E. K.....Coleraine
§Rudie, P. S.....Duluth
§Ryan, W. J.....Duluth
Sach-Rowitz, Alvin.....Moose Lake
§Salter, R. A.....Virginia
Sandell, S. T.....Nopeming
Sarff, O. E.....Duluth
Sax, M. H.....Duluth
Sax, S. G.....Duluth
§Schneider, L. E.....Duluth
§Schroder, C. H.....Duluth
Schweiger, T. R.....Hibbing
Seashore, R. T.....St. Paul
*Shastid, T. H.....Duluth
Shaw, A. W.....Virginia
Sher, D. A.....Virginia
Siegel, J. S.....Virginia
§Sinamark, Andrew.....Hibbing
Sisler, C. E.....Grand Rapids
§Smith, C. M.....Duluth
Smith, W. R.....Grand Marais
Snyker, O. E.....Ely
§Spang, A. J.....Duluth
§Spang, J. S.....Duluth
Spicer, F. W.....Duluth
Spurbeck, R. G.....Cloquet
Strathern, M. L.....Gilbert
§Strauss, E. C.....Duluth
§Strobel, W. G.....Duluth
Stuart, A. B.....Cloquet
Sutherland, H. N.....Ely
Swedberg, W. A.....Duluth
§Swenson, A. O.....Duluth
§Taylor, C. W.....Duluth
§Teich, K. W.....Duluth
§Terrell, B. J.....Nopeming
§Tibbetts, M. H.....Duluth
Tilderquist, D. L.....Duluth
Tingdale, Carlyle.....Hibbing
Trytten, E. G.....Duluth
§Tuohy, E. L.....Duluth
§Urberg, S. E.....Duluth
Van Valkenberg, J. D.....Floodwood
§†Walker, A. E.....Duluth
§Wallace, M. O.....Duluth
§Wells, A. H.....Duluth
§Wheeler, D. W.....Duluth
Winter, J. A.....Duluth
§Young, T. O.....Duluth
†Zlatovski, M. L.....Duluth

SCOTT-CARVER COUNTY MEDICAL SOCIETY

Regular meetings, second Tuesday of the alternate months
Annual meeting, June
Number of Members: 29

President
Westerman, F. C.....Montgomery

Secretary
Schimelpfenig, G. T.....Chaska

Ahrens, C. F.....Prior Lake
Bodaski, A. A.....Montgomery
Bratholdt, J. W.....Watertown
§Buck, F. H.....Shakopee
Carlson, N. C.....Watertown
§Cervenka, C. F.....New Prague
§Doherty, E. M.....New Prague
§Havel, H. W.....Jordan
Hebeisen, M. B.....Chaska
§Juergens, H. M.....Belle Plaine
Klein, J. C.....Shakopee
§Kortsch, F. P.....Prior Lake
§Kucera, S. T.....Lonsdale
Leibold, E. F.....New Prague
Martin, T. P.....Arlington
Nagel, H. D.....Waconia
Nelson, K. L.....Clara City
Ninneman, N. N.....Waconia
Novak, E. E.....New Prague
Olson, C. J.....Belle Plaine
§Pearson, B. F.....Shakopee
Pogue, R. E.....Watertown
§Ponterio, J. E.....Shakopee
†Reiter, H. W.....Shakopee
Schmelpfenig, G. T.....Chaska
§Simons, B. H.....Chaska
§†Westerman, A. E.....Montgomery
§Westerman, F. C.....Montgomery
Wunder, H. E.....Shakopee

SOUTHWESTERN MINNESOTA MEDICAL SOCIETY

Cottonwood, Jackson, Murray, Nobles, Pipestone and Rock Counties
Regular meetings, at call
Annual meeting, October
Number of Members: 63

President
Halpern, D. J.....Brewster

Secretary
Mork, B. O., Jr.....Worthington

Anderson, O. W.....Luverne
§Arnold, E. W.....Adrian
§Balmer, A. I.....Pipestone
Basinger, H. P.....Windom
Basinger, H. R.....Mountain Lake
Beckering, Gerrit.....Edgerton
§Benjamin, W. G.....Pipestone
Bofenkamp, F. W.....Luverne
†Brown, A. H.....Pipestone
Burleigh, J. S.....Luverne
Carlson, J. V.....Westbrook
Christiansen, H. A.....Jackson
Chunn, S. S.....Pipestone
§DeBoer, Hermanus.....Edgerton
Doman, V. W.....Lakefield
Doms, H. C. A.....Slayton
§Hallin, R. P.....Worthington
Halloran, W. H.....Jackson
§Halpern, D. J.....Brewster
§Harrison, P. W.....Worthington
Hebbel, Robert.....Minneapolis
§Heiberg, O. M.....Worthington
§Hitchings, W. S.....Lakefield
Hoyer, L. J.....Windom
Johnson, R. M.....Slayton
Kabrick, O. A.....Jackson
Karleen, B. N.....Jackson
§Kilbride, E. A.....Worthington
†Kilbride, J. S.....Worthington
Laikola, L. A.....Adrian
§Lohmann, J. G.....Pipestone
Maitland, E. T.....Jackson
†Manson, F. M.....Worthington
McElmeel, E. F.....Seattle, Wash.
§Mork, B. O., Sr.....Worthington
§Mork, B. O., Jr.....Worthington
§Nealy, D. E.....Adrian
Nickerson, J. R.....Heron Lake
Pankratz, P. J.....Mountain Lake
Patterson, H. D.....Slayton
Pierson, R. F.....Slayton
§Piper, W. A.....Mountain Lake
Rogers, C. W.....Minneapolis
§Rose, J. T.....Lakefield
§Schade, F. L.....Worthington
§Schmidt, W. R.....Worthington

Schutz, E. S.....Mountain Lake
Sherman, C. L.....Luverne
§Slater, S. A.....Worthington
§Sogge, L. L.....Windom
§Sorum, F. T.....Jasper
Stam, John.....Worthington
§Stanley, C. R.....Worthington
Stevenson, B. M.....Fulda
Stratte, H. C.....Windom
Tofte, Josephine.....Minneapolis
Waller, J. D.....Pine City
§Wells, W. B.....Jackson
§Williams, C. A.....Pipestone
Williams, L. A.....Slayton
*Wright, C. O.....Luverne

STEARNS-BENTON COUNTY MEDICAL SOCIETY

Regular meetings, third Thursday of month
Annual meeting, third Thursday of December
Number of Members: 56

President
Goehrs, G. G.....St. Cloud
Secretary
Libert, J. N.....St. Cloud

§Baumgartner, F. H.....Albany
Beuning, J. B.....St. Cloud
Brigham, C. F.....St. Cloud
§Buscher, J. C.....St. Cloud
§Clark, H. B.....St. Cloud
Cleaves, W. D.....Sauk Center
§Donaldson, C. S.....Foley
Du Bois, J. F.....Sauk Center
§Emerson, E. E.....Osakis
Engstrom, G. F.....Belgrade
§Evans, L. M.....Sauk Rapids
§Fleming, T. N.....St. Cloud
§Friesleben, William.....Sauk Rapids
§Gaida, J. B.....St. Cloud
Goehrs, G. H.....St. Cloud
Goehrs, H. W.....St. Cloud
Grant, J. C.....Sauk Center
Haberman, Emil.....Osakis
§Halenbeck, P. L.....St. Cloud
§Hall, W. E.....Maple Lake
†Hemstead, Werner.....Fergus Falls
Henry, C. J.....Milaca
§Jones, R. N.....St. Cloud
§Kelly, J. F.....Cold Springs
Kettlewell, R. B.....Sauk Center
Kohler, D. W.....St. Joseph
§Koop, S. H.....Richmond
Kuhlman, L. B.....Melrose
Lewis, C. B.....St. Cloud
Libert, J. N.....St. Cloud
§Luckemeyer, C. J.....St. Cloud
§McDowell, J. P.....St. Cloud
§Mahowald, A.....Albany
Meyer, A. A.....Melrose
§Milhaupt, E. N.....St. Cloud
§Murphy, James E.....St. Cloud
Musachio, N. F.....Foley
Myre, C. R.....Paynesville
§Nessa, C. B.....St. Cloud
§O'Keefe, L. P.....St. Cloud
§Peterson, R. T.....St. Cloud
Raetz, S. .....Maple Lake
§Richards, W. B.....St. Cloud
§Reif, H. J.....St. Cloud
Sandven, N. O.....Paynesville
Schatz, F. J.....St. Cloud
§Schmitz, E. J.....Holdingford
Sherwood, G. E.....Kimball
Stangl, P. E.....St. Cloud
Stewart, N. E.....St. Petersburg, Fla.
Veranth, L. A.....St. Cloud
§Walfred, K. A.....St. Cloud
§Wenner, W. T.....St. Cloud
§Wetzel, E. V.....St. Cloud
Wittrock, L. H.....Watkins
Zachman, A. H.....Melrose

STEELE COUNTY MEDICAL SOCIETY

Regular meetings, at call
Annual meeting, January
Number of Members: 15

President
Berghs, L. V.....Owatonna
Secretary
Stransky, T. W.....Owatonna

Berghs, L. V.....Owatonna
Dewey, D. H.....Owatonna
Ertel, E. O.....Ellendale
§Hartung, E. H.....Claremont
Kurtin, H. J.....Blooming Prairie
McEnaney, C. T.....Owatonna
McIntyre, J. A.....Owatonna
Melby, Benedik.....Blooming Prairie
Moorhead, D. E.....Owatonna
§Nelson, E. J.....Owatonna
Roberts, O. W.....Owatonna
Schaefer, J. F.....Owatonna
Senn, E. W.....Owatonna
Stransky, T. W.....Owatonna
§Wilkowske, R. J.....Owatonna

UPPER MISSISSIPPI MEDICAL SOCIETY

Aitkin, Beltrami, Cass, Clearwater, Crow Wing, Hubbard, Koochiching,
Lake of the Woods, Morrison, Todd and Wadena Counties
Regular meetings, Spring, Summer, Fall, Winter
Annual meeting, February
Number of Members: 92

President
Ringle, O. J.....Walker
Secretary
Badeaux, G. I.....Brainerd

Adkins, G. H.....Pine River
Amundson, A. E.....Little Falls
Anderson, F. C.....Little Falls
Badeaux, G. I.....Brainerd
§Beise, R. A.....Brainerd
Bender, J. H.....Brainerd
§Borgerson, A. H.....Long Prairie
Cardle, G. E.....Brainerd
*†Christie, G. R.....Long Prairie
Christie, R. L.....Long Prairie
Closuit, F. C.....Aitken
Cook, J. M.....Staples
Coombs, C. H.....Cass Lake
†Corrigan, J. E.....Spooner
§Crow, E. R.....Ah-Gwah-Ching
§Dale, L. N.....Crosby
Davis, L. F.....Wadena
Davis, L. T.....Wadena
Davis, T. C.....Wadena
Eller, John.....Park Rapids
§Erickson, Alvin.....Long Prairie
Eyres, T. E.....Pequot Lakes
Fait, R. V.....Little Falls
§Fitzsimmons, W. E.....Brainerd
Friefeld, Saul.....Wadena
Garlock, A. V.....Bemidji
Garlock, D. H.....Bemidji
Gerber, M. P.....Brainerd
Ghostley, Mary C.....Puposky
†Gilmore, Rowland.....Bemidji
Grogan, J. S.....Wadena
Groschupf, T. P.....Bemidji
Grose, F. N.....Clarissa
§Halladay, G. J.....Brainerd
Hanover, R. D.....Little Fork
Healy, R. T.....Pierz
Hendricks, E. J.....Verndale
†House, Z. E.....Cass Lake
Houston, D. M.....Park Rapids
§Hubbard, O. E.....Brainerd
Hubin, E. G.....Swanville
Jamieson, E. F.....Brainerd
†Johnson, C. E.....Pine River
Johnson, D. L.....Little Falls
Johnson, E. W.....Bemidji
Kinports, E. B.....International Falls
Knight, E. G.....Swanville
Larson, Leroy.....Bagley
Laughlin, J. T.....Grey Eagle
§Lee, H. W.....Brainerd
Leemhuis, G. H.....Aitkin
§Lenarz, A. J.....Browerville
Longfellow, Helen B.....Brainerd
Lund, W. J.....Staples
Mark, Hilbert.....Minneapolis
McCann, D. F.....Bemidji
Mitby, I. L.....Aitkin
Monahon, R. H., Jr.....International Falls
§Mosby, M. E.....Long Prairie
§Mulligan, A. M.....Brainerd
Nelson, Bernette G.....Menahga
Nelson, Bernice A.....Northome
§Nelson, N. P.....Brainerd
Nixon, James B.....Crosby
Nolan, D. E.....Dayton, Ohio
Parker, Warren E.....Sebeka
Petraborg, Harvey T.....Aitkin
Pierce, C. H.....Wadena
§Potek, D. M.....International Falls
§Quanstrom, V. E.....Brainerd
§†Ratcliffe, J. J.....Aitkin
Rice, H. G.....Aitkin
Ringle, O. F.....Walker
§Sanderson, A. G.....Deerwood
§Simons, E. J.....Swanville
§Smith, B. A.....Crosby
Stein, R. J.....Pierz
§Thabes, J. A., Sr.....Brainerd
§Thabes, J. A., Jr.....Brainerd
Trommald, Gladys.....Brainerd
Vandersluis, C. W.....Bemidji
§Watson, A. M.....Royalton
†Watson, J. D.....Minneapolis
Watson, P. T.....Northfield
§Watson, S. W.....Royalton
Whittemore, D. D.....Bemidji
Will, C. B.....Bertha
Will, W. W.....Bertha
§Williams, M. M.....Ah-Gwah-Ching
Wilson, V. O.....Minneapolis
Wingquist, C. G.....Crosby
Withrow, M. E.....International Falls

WABASHA COUNTY MEDICAL SOCIETY

Regular meetings, Spring and Fall
Annual meeting, first Thursday after first Monday in October
Number of Members: 14

President
Flesche, B. A.....Lake City
Secretary
Wilson, W. F.....Lake City

§Bayley, E. C.....Lake City
§Bouquet, B. J.....Wabasha
§Bowers, R. N.....Lake City
Collins, J. S.....Wabasha
*Dempsey, D. P.....Kellogg
§Ekstrand, L. M.....Wabasha
§Ellis, E. W.....Elgin
§Flesche, B. A.....Lake City
Glabe, R. A.....Plainview
§Mahle, D. G.....Plainview
§Ochsner, C. G.....Wabasha
Replogle, W. H.....Wabasha
§Wellman, T. G.....Lake City
§†Wilson, W. F.....Lake City

WASECA COUNTY MEDICAL SOCIETY

Regular meetings, every six months
Annual meeting, January
Number of Members: 9

President
Olds, G. H.....New Richland

Secretary
Oeljen, S. C. G.....Waseca

§Davis, R. D.....Waseca
§Gallagher, B. J.....Waseca
§Hottinger, R. C.....Janesville
§McIntire, H. M.....Waseca

§Oeljen, S. C. G.....Waseca
§Olds, G. H.....New Richland
†Spittler, R. O.....New Richland
§Swenson, O. J.....Waseca
§Wadd, C. T.....Janesville

WASHINGTON COUNTY MEDICAL SOCIETY

Regular meetings, Second Tuesday in each month, except June, July, August
Annual meeting, second Tuesday in December
Number of Members: 16

President
McCarten, F. M.....Stillwater

Secretary
Boleyn, E. S.....Stillwater

§Boleyn, E. S.....Stillwater
§Carlson, R. E.....Stillwater

§†Haines, J. H.....Stillwater
Holcomb, J. T...Marine-on-St. Croix
Humphrey, W. R.....Stillwater
§Johnson, R. G.....Stillwater
§Josewski, R. J.....Stillwater
§McCarten, F. M.....Stillwater
Poirier, J. A.....Forest Lake

Ruggles, G. M.....Forest Lake
§Samson, E. R.....Stillwater
§Sherman, C. H.....Bayport
§Stuhr, J. W.....Stillwater
Thompson, V. C...Marine-on-St. Croix
Van Meier, Henry.....Stillwater
Wilkinson, Stella.....Faribault

WATONWAN COUNTY MEDICAL SOCIETY

Pending approval of the 1947 House of Delegates of the dissolution of the above society, the following physicians have become members of the Redwood-Brown County Medical Society

Bergman, O. B.....St. James

Bratrud, E. J.....St. James
Bregel, F. L.....St. James

*Grimes, H. B.....Madelia

WEST CENTRAL MINNESOTA MEDICAL SOCIETY

Big Stone, Pope, Stevens, and Traverse Counties
Regular meetings, March, May, September and November
Annual Meeting, September
Number of Members: 28

President
Merrill, Robert .....Morris

Secretary
Rydburg, W. C.....Brooten

§Arneson, A. I.....Morris
§Behmler, F. W.....Morris
§Bergan, Otto.....Clinton
†Bolsta, Charles.....Ortonville
§Dahle, M. B.....Glenwood
§Eberlin, E. A.....Glenwood

§Elsey, E. M.....Glenwood
Elsey, J. R.....Glenwood
Fitzgerald, E. T.....Morris
Gericke, J. T.....Glenwood
§Giesen, A. F.....Starbuck
Hedemark, H. H.....Ortonville
Hedemark, T. A.....Ortonville
§Karn, B. R.....Ortonville
§Karn, J. F.....Ortonville
Lindberg, A. L.....Wheaton
§Linde, Herman.....Cyrus

Magnuson, A. E.....Wheaton
§Merrill, R. W.....Morris
McIver, B. A.....Lowry
§Mooney, L. P.....Graceville
Muir, W. F.....Browns Valley
§O'Donnell, D. M.....Ortonville
§Oliver, I. L.....Graceville
Ransom, M. I.....Hancock
Rossberg, Raymond A.....Morris
§Rydburg, W. C.....Brooten
Swedenberg, Paul A.....Glenwood
Wagner, N. W. .....Graceville

WINONA COUNTY MEDICAL SOCIETY

Regular meetings, first Monday in January, April, July, October
Annual meeting, first Monday in January
Number of Members: 30

President
Hamlon, John.....St. Charles

Secretary
Heise, Paul.....Winona

§Benoit, F. T.....Winona
§Boardman, D. V.....Winona
§Canfield, W. W.....Winona
§Christensen, E. E. .....Winona
§Hamlon, J. S.....St. Charles
§Heise, Herbert.....Winona

§Heise, Paul.....Winona
§†Heise, W. F. C.....Winona
§Heise, W. V.....Winona
§Johnston, L. F.....Winona
Keyes, J. D.....Winona
§Loomis, G. L.....Winona
§Mattison, P. A.....Winona
McLaughlin, E. M.....Winona
§Meinert, A. E.....Winona
Nauth, B. S.....Winona
Neumann, C. A. .....Winona
§Page, R. L.....St. Charles

§†Robbins, C. P.....Winona
§Roemer, H. J.....Winona
§Roth, F. D.....Lewiston
§Satterlee, H. W.....Lewiston
§Schaefer, Samuel .....Winona
§Steiner, L. W.....Winona
§Tweedy, G. J.....Winona
Tweedy, J. A.....Winona
§Tweedy, R. B.....Winona
Vollmer, F. J.....Winona
§Wilson, R. H.....Winona
§Younger, L. I.....Winona

WRIGHT COUNTY MEDICAL SOCIETY

Regular meetings quarterly
Annual meeting, October
Number of Members: 16

President
Greenfield, W. T.....Delano

Secretary
Catlin, J. J.....Buffalo

§Anderson, W. P.....Buffalo
§Bendix, L. M.....Annandale

§Catlin, J. J.....Buffalo
§Catlin, T. J.....Buffalo
§Ellison, F. E.....Monticello
§Greenfield, W. T.....Delano
Grundset, O. J.....Montrose
Guilfoile, P. J.....Delano
Harriman, Leonard.....Howard Lake

§Hart, W. E.....Monticello
Peterson, O. L.....Cokato
§Ridgway, A. M.....Annandale
§Roholt, C. L.....Waverly
§Swezey, B. F. .....Buffalo
§Thielen, R. D.....St. Michael
§Thompson, Arthur .....Cokato

Alphabetic Roster

Key to Symbols: *Deceased; †Affiliate, Associate or Life Member; ‡In Service; §Wife is member of Woman's Auxiliary

Aagaard, G. N., Jr.....Minneapolis
Aanes, A. M.....Red Wing
Abbott, K. H.....Rochester
†Aborn, W. H.....Hawley
§Abraham, A. L.....Duluth
§Abramson, Milton.....Minneapolis
Adair, A. F., Jr.....St. Paul
§Adams, B. S.....Hibbing
§Adams, R. C.....Bird Island
§Adams, Richard C.....Rochester
Addy, E. R.....Gilbert
Adkins, C. D.....Minneapolis
§Adkins, C. M.....Thief River Falls
§Adkins, G. H.....Pine River
§Adson, A. W.....Rochester
Adler, B. C.....St. Paul
Ahern, E. E.....Minneapolis
§Ahlfs, J. J.....Caledonia
§Ahrens, A. E.....St. Paul
§Ahrens, A. H.....St. Paul
Ahrens, C. F.....Prior Lake
†§Aitkens, H. B.....LeCenter
Akester, Ward.....Fergus Falls
Akins, W. M.....Red Wing
§Albrecht, H. H.....Lindstrom
§Alden, J. F.....St. Paul
§Aldrich, C. A.....Rochester
*†Alexander, F. H.....St. Paul
Alexander, H. A.....Minneapolis
Alger, E. W.....Minneapolis
§Aling, C. A.....Minneapolis
§†Aling, C. P.....Minneapolis
§Allen, E. V. N.....Rochester
§Allen, H. B.....Austin
§*Allen, H. W.....Minneapolis
§Altnow, H. O.....Minneapolis
§Alvarez, W. C.....Rochester
Amberg, Samuel.....Rochester
Ambrusko, J. S.....Rochester
Amundsen, A. E.....Little Falls
§Andersen, A. G.....Minneapolis
§Andersen, S. C.....Minneapolis
Anderson, C. D.....Rochester
Anderson, C. L.....Ely
Anderson, Donald.....Lamberton
§Anderson, D. D.....Minneapolis
§Anderson, D. P., Jr.....Austin
§Anderson, E. D.....Minneapolis
§Anderson, E. R.....Minneapolis
Anderson, F. C.....Little Falls
§Anderson, F. J.....Minneapolis
Anderson, G. A.....Hibbing
Anderson, H. R.....Deer River
§Anderson, J. K.....Minneapolis
Anderson, J. T.....Red Lake Falls
§Anderson, K. W.....Minneapolis
Anderson, M. E., Jr.....Rochester
§Anderson, M. J.....Rochester
§Anderson, M. W.....Rochester
*Anderson, N. E.....Harmony
Anderson, O. W.....Luverne
§Anderson, R. E.....Willmar
Anderson, R. E.....Rochester
Anderson, S. H.....Red Wing
§Anderson, U. S.....Minneapolis
§Anderson, W. P.....Buffalo
Anderson, W. E.....Clearbrook
Anderson, W. T.....Minneapolis
Andreassen, E. C.....Minneapolis
Andresen, K. D.....Minneapolis
§Andrews, R. N.....Mankato
§Andrews, R. S.....Minneapolis
Arends, A. L.....Jamestown, N. D.
§Arey, S. L.....Minneapolis
§Arhelger, S. W.....Duluth
§Arko, J. L.....Hibbing
§Arlander, C. E.....Minneapolis
§Arling, L. S.....Minneapolis
Arling, P. A.....Rochester
§Armstrong, E. L.....Duluth
Armstrong, R. S.....Winnebago
§Arndt, H. W.....Detroit Lakes
§Arneson, A. I.....Morris
Arnold, Anna W.....Minneapolis
Arnold, D. C.....Minneapolis
§Arnold, E. W.....Adrian
§Arnquist, A. S.....St. Paul
Arnson, J. M.....Benson
§Arny, F. P.....St. Paul
§Arvidson, C. G.....Minneapolis
§Arzt, P. K.....St. Paul
‡Ashburn, F. S.....Rochester
§Ashley, W. F.....Rochester
§Askren, E. L., Jr.....Rochester

§Athens, A. G.....Duluth
§Aune, Martin.....Minneapolis
†Aurand, W. H.....Minneapolis
§Aurelius, J. R.....St. Paul
§Ausman, C. F.....St. Paul
†Ayres, G. T.....Phoenix, Ariz.

Babb, F. S.....Rochester
Bachnik, F. W.....Hibbing
§Backus, R. W.....Nopeming
§Bacon, D. K.....St. Paul
§Bacon, J. F.....Rochester
§†Bacon, L. C.....St. Paul
Badeaux, G. I.....Brainerd
§Baggenstoss, A. H.....Rochester
§Bagley, C. M.....Duluth
Bagley, Elizabeth C.....Duluth
Bagley, W. R.....Duluth
Baich, V. M.....Bovey
§Bailey, J. A.....Rochester
§Bailey, R. B.....Fairmont
§Bair, H. L.....Rochester
Baird, J. W.....Minneapolis
§Baken, M. P.....Minneapolis
Baker, A. B.....Minneapolis
§Baker, A. C.....Fergus Falls
Baker, A. T.....Minneapolis
Baker, C. E.....Herman
§Baker, E. L.....Minneapolis
§Baker, G. S.....Rochester
§Baker, H. R.....Hayfield
Baker, Jeannette L.....Fergus Falls
Baker, Looe.....Minneapolis
§Baker, N. H.....Fergus Falls
Baker, R. L.....Hayfield
§Bakkila, H. E.....Duluth
§Balcome, M. M.....St. Paul
§Balfour, D. C.....Rochester
§Balfour, D. C., Jr.....Rochester
§Balfour, W. M.....Rochester
§Balkin, S. G.....Minneapolis
§Balmer, A. I.....Pipestone
Bank, H. E.....Minneapolis
‡Banner, E. A.....Rochester
§Barber, T. E.....Austin
§Bardon, Richard.....Duluth
§Bargen, J. A.....Rochester
§Barger, J. D.....Rochester
§Barker, J. D.....Duluth
§Barker, N. W.....Rochester
§Barnes, A. R.....Rochester
Barnett, J. M.....St. Paul
Barney, L. A.....Duluth
§Barr, L. C.....Albert Lea
‡Barr, M. M.....McCoy, Wis.
Barr, R. N.....Minneapolis
Barr, W. H.....Wells
§Barrett, E. E.....Duluth
§Barron, Moses.....Minneapolis
§Barry, L. W.....St. Paul
Barsness, Nellie O. N.....St. Paul
Barton, J. C.....St. Paul
Basinger, H. P.....Windom
Basinger, H. R.....Mountain Lake
Batdorf, B. N.....Good Thunder
†Batterman, J. P.....Minneapolis
§Baumgartner, F. H.....Albany
§Baxter, S. H.....Minneapolis
§Bayard, H. F.....Minneapolis
§Bayley, E. C.....Lake City
Bayrd, E. D.....Rochester
§Beach, Northrup.....Minneapolis
Beahrs, O. H.....Rochester
§†Beals, Hugh.....St. Paul
†Beard, A. H.....Minneapolis
§Beare, J. B.....Rochester
‡Bearzy, H. J.....Rochester
Bechtel, M. J.....Warren
§Becker, F. T.....Duluth
Beckering, Gerrit.....Edgerton
§†Beckman, W. G.....San Francisco, Calif.
§Bedford, E. W.....Minneapolis
§Beech, R. H.....St. Paul
§Beek, H. O.....St. Paul
Beer, J. .....St. Paul
§Behmler, F. W.....Morris
§Behr, O. K.....Crookston
§Beise, R. A.....Brainerd
Beiswanger, R. H.....Minneapolis
§Bell, C. C.....St. Paul
†Bell, E. T.....Minneapolis
§Belote, G. B.....Caledonia
Belzer, M. S.....Minneapolis

Bender, J. H.....Brainerd
§Bendix, L. H.....Annandale
§Benedict, W. L.....Rochester
§Benepe, J. L.....St. Paul
Benesh, L. A.....Minneapolis
Benesh, N. G.....Minneapolis
§Benjamin, A. E.....Minneapolis
§Benjamin, E. G.....Minneapolis
§Benjamin, H. G.....Minneapolis
§Benjamin, W. G.....Pipestone
§Benn, F. G.....Minneapolis
‡Bennett, J. G.....Rochester
Bennett, J. K.....Phoenix, Ariz.
‡Bennett, W. A.....Rochester
Bennion, P. H.....St. Paul
§Benoit, F. T.....Winona
§Bentley, N. P.....St. Paul
§Benton, P. C.....Gibbon
Bepko, Marie K.....Cloquet
Berdez, G. L.....Duluth
§Bergan, Otto.....Clinton
Berge, D. O.....Roseau
Berger, A. G.....Minneapolis
Bergh, G. S.....Minneapolis
§Bergh, L. N.....Montevideo
Bergh, Solveig, M.....Minneapolis
Berghs, L. V.....Owatonna
Bergman, O. B.....St. James
Bergquist, K. E.....Battle Lake
§Berkman, D. M.....Rochester
§Berkman, D. S.....Rochester
§Berkman, J. M.....Rochester
§Berkwitz, N. J.....Minneapolis
Berlin, A. S.....Hallock
Berman, Reuben.....Minneapolis
Bernstein, W. C.....St. Paul
§Bertelson, O. L.....Crookston
§Bessesen, A. N., Jr.....Minneapolis
§Bessessen, D. H.....Minneapolis
Bessessen, W. A.....Minneapolis
Beuning, J. B.....St. Cloud
§Bianco, A. J.....Duluth
§Bicek, J. F.....St. Paul
§Bickel, W. H.....Rochester
Biedermann, Jacob..Thief River Fallls
Bieter, R. N.....Minneapolis
§Bigelow, C. E.....Dodge Center
Bigler, I. E.....Perham
§Billings, R. E.....Franklin
†Binet, H. E.....Grand Rapids
Binger, H. E.....St. Paul
Biorn, C. L.....Rochester
Black, A. S., Jr.....Rochester
Black, E. J. .....St. Paul
§Black, B. M.....Rochester
Black, W. A.....Rochester
Blackburn, C. M. .....Rochester
Blackmore, S. C. .....Biwabik
‡Blaisdell, J. S.....Rochester
Blake, A. J. .....Hopkins
§Blake, James.....Hopkins
§Blake, James A.....Hopkins
†Blake. P. S.....Minneapolis
*Blakely, C. C.....Barnum
§Blakey, A. R.....Osakis
Bloedel, T. J. G. .....Osseo
§Blomberg, W. R.....Princeton
Blumenthal, J. S.....Minneapolis
§Boardman, D. V.....Winona
§Bock, R. A.....St. Paul
Bockman, M. W. H.....Minneapolis
Bodaski, A. A.....Montgomery
Boeckmann, Egil.....St. Paul
§Boehrer, J. J., Jr.....Minneapolis
Bofenkamp, F. W.....Luverne
§Boies, L. R.....Minneapolis
§Bolender, H. L.....St. Paul
§Boleyn, E. S.....Stillwater
§Boline, C. A.....Battle Lake
§†Bolsta, Charles.....Ortonville
Bolz, J. A.....Grand Rapids
Boman, P. G.....Duluth
Boody, G. J., Jr.....Dawson
†Booth, A. E.....Minneapolis
§Boothby, W. M.....Rochester
§Boreen, C. A.....Minneapolis
Booren, J. C. .....Duluth
Borg, J. F.....St. Paul
§Borgerson, A. H.....Long Prairie
Borgeson, E. J.....Minneapolis
§Borman, C. N.....Minneapolis
Borowicz, L. A.....Minneapolis
Bosland, H. G.....Willmar

Bossert, C. S. ..... Mora
Bottolfson, B. T. ..... Moorhead
§Bouma, L. R. ..... St. Paul
§Bouquet, B. J. ..... Wabasha
Bowen, R. L. ..... Hibbing
§Bowers, G. G. ..... Minneapolis
§Bowers, R. N. ..... Lake City
§Bowing, H. H. ..... Rochester
§Boyd, L. M. ..... Alexandria
Boyer, S. H. ..... Duluth
§Boyer, S. H., Jr. ..... Duluth
Boylan, R. N. ..... Rochester
Boynton, Ruth E. ..... Minneapolis
Boysen, Herbert ..... Madelia
§Boysen, Peter ..... Pelican Rapids
§Braasch, W. F. ..... Rochester
§Braastad, F. W. ..... Rochester
Bradley, W. F. ..... Rochester
§Brand, G. D. ..... St. Paul
§Brand, W. A. ..... Redwood Falls
Brandes, R. W. ..... Rochester
§Branham, D. S. ..... Albert Lea
§Branton, B. J. ..... Willmar
Bratholdt, J. W. ..... Watertown
§Bratrud, A. F. ..... Minneapolis
§Bratrud, Edward ... Thief River Falls
§Bratrud, T. E. .... Thief River Falls
Bratrude, E. J. ..... St. James
§*Braverman, N. J. ..... Duluth
Bray, E. R. ..... St. Paul
Bray, K. E. ..... New Orleans, La.
§Bray, P. N. ..... Duluth
Bray, R. B. ..... Biwabik
Bregel, F. L. ..... St. James
§Brekke, H. J. ..... Minneapolis
‡Breslow, Lester ..... Rochester
§Briggs, J. F. ..... St. Paul
Briggs, Natalie M., Wenatchee, Wash.
Brigham, C. F. ..... St. Cloud
*Brigham, F. T. ..... Watkins
Brill, Alice K. ..... Minneapolis
Brink, A. A. ..... Baudette
Brink, D. M. ..... Hutchinson
§Broadie, T. E. ..... St. Paul
§Broders, A. C. ..... Rochester
§Brodie, W. D. ..... St. Paul
Brooks, C. N. ..... Minneapolis
Brooks, L. M. ..... Rochester
Brooksby, W. A. ..... Rochester
§Brown, A. E. ..... Rochester
†Brown, A. H. ..... Pipestone
†Brown, E. D. ..... Paynesville
Brown, F. J. ..... Minneapolis
§Brown, H. A. ..... Rochester
§Brown, H. S. ..... Rochester
Brown, J. C. ..... St. Paul
Brown, J. R. ..... Minneapolis
§Brown, L. L. ..... Crookston
Brown, M. H. ..... Rochester
§Brown, P. W. ..... Rochester
†Brown, S. P. ..... Minneapolis
Brown, W. D. ..... Minneapolis
Browning, W. H. ..... Rochester
Brownson, B. C. ..... Rochester
Brownstone, Manuel ..... Sandstone
§Brunsting, L. A. ..... Rochester
§Brusegaard, J. F. ..... Red Wing
Brutsch, G. C. ..... Minneapolis
Bryan, A. L. ..... Rochester
§Buchstein, H. F. ..... Minneapolis
§Buck, F. H. ..... Shakopee
§Buckley, R. P. ..... Duluth
§Buie, Louis A. ..... Rochester
Buirge, R. E. ..... Minneapolis
Bulinski, T. J. ..... St. Paul
Bulkley, Kenneth ..... Minneapolis
§Bunker, B. W. ..... Anoka
§Burch, E. P. ..... St. Paul
§Burch, F. E. ..... St. Paul
§Burchell, H. B. ..... Rochester
Burleigh, J. S. ..... Luverne
Burlingame, D. A. ..... St. Paul
Burmeister, R. O. ..... Welcome
§Burnap, W. L. ..... Fergus Falls
Burns, F. M. ..... Milan
Burns, L. S. ..... So. St. Paul
Burns, M. A. ..... Milan
§Burns, R. M. ..... St. Paul
Burton, C. G. ..... St. Paul
§Buscher, J. C. ..... St. Cloud
Bush, R. P. ..... Rochester
Bushard, W. J. ..... Minneapolis
§Busher, H. H. ..... St. Paul
§Butler, J. K. ..... Carlton
§Butt, H. R. ..... Rochester
§Butturff, C. R. ..... Freeborn
§Butzer, J. A. ..... Mankato
§Buzzelle, L. K. ..... Minneapolis

§Cable, M. L. ..... Minneapolis
§Cabot, C. M. ..... Minneapolis
§Cabot, V. S. ..... Minneapolis
Cady, L. H. ..... Minneapolis
§Cain, C. L. ..... St. Paul
§Cain, J. C. ..... Rochester
Cain, J. H. ..... Hoffman
§Cairns, R. J. ..... Redwood Falls
Calhoun, F. W. ..... Albert Lea
Callahan, F. F. ..... St. Paul
Callerstrom, G. W. ..... Minneapolis
Cameron, Isabell L. ..... Minneapolis
Cameron, J. H. ..... Erskine
Cameron, J. M. ..... Rochester
§Camp, J. D. ..... Rochester
Camp, W. E. ..... Minneapolis
§Campbell, D. C. ..... Rochester
Campbell, L. M. ..... Minneapolis
§Campbell, O. J. ..... Minneapolis
§Canfield, W. W. ..... Winona
Cantwell, W. F. ... International Falls
§Cardle, A. E. ..... Minneapolis
Cardle, G. E. ..... Brainerd
§Carey, J. B. ..... Minneapolis
Cariker, Mildred ..... Rochester
§Carley, W. A. ..... St. Paul
Carlson, A. E. ..... Warren
Carlson, C. E. ..... Alexandria
Carlson, J. V. ..... Westbrook
§Carlson, Lawrence ..... Minneapolis
§Carlson, L. T. ..... Minneapolis
Carlson, N. C. ..... Watertown
§Carlson, R. E. ..... Stillwater
Carman, J. E. ..... Detroit Lakes
‡Carmona, M. G. ..... Rochester
§Caron, R. P. ..... Minneapolis
§Carpenter, R. E. ..... Rochester
Carr, D. T. ..... Rochester
§Carroll, W. C. ..... St. Paul
§Carryer, H. M. ..... Rochester
Carter, J. W., Jr. ..... Rochester
Carstens, C. F. ..... Hibbing
Caspers, C. G. ..... Minneapolis
§Catlin, J. J. ..... Buffalo
§Catlin, T. J. ..... Buffalo
§Cavanor, F. T. ..... Minneapolis
Ceder, E. T. ..... Minneapolis
Ceplecha, S. F. ..... Redwood Falls
§Cervenka, C. F. ..... New Prague
§Chadbourn, C. R. ..... St. Paul
Challman, S. A. ..... Minneapolis
Chambers, W. C. ..... Blue Earth
Chapman, J. P., Jr. ..... Rochester
Chapman, T. L. ..... Duluth
§Chatterton, C. C. ..... St. Paul
Chermak, F. G. ..... International Falls
Chesley, A. J. ..... Minneapolis
Chesley, G. L. ..... Rochester
§Christensen, C. H. ..... Duluth
§Christensen, E. E. ..... Winona
Christensen, N. A. ..... Rochester
§Christenson, G. R. ..... Minneapolis
§Christiansen, Andrew ..... St. Paul
Christiansen, H. A. ..... Jackson
§Christianson, H. W. ..... Minneapolis
*†Christie, G. R. ..... Long Prairie
Christie, R. L. ..... Long Prairie
*†Christison, J. T. ..... St. Paul
Chunn, S. S. ..... Pipestone
Ciaramelli, Letizia C. ..... Rochester
§Clagett, O. T. ..... Rochester
Clark, F. H. ..... Rochester
§Clark, H. B. ..... St. Cloud
§Clark, H. B., Jr. ..... St. Paul
*†Clark, H. S. ..... Minneapolis
§Clark, I. T. ..... Duluth
§Clark, L. W. ..... Spring Valley
Clarke, E. K. ..... Minneapolis
Clarke, E. T. ..... Buhl
‡Clarkson, W. R. ..... Rochester
§Clay, L. B. ..... Minneapolis
§Claydon, H. F. ..... Red Wing
§†Claydon, L. E. ..... Red Wing
Cleaves, W. D. ..... Sauk Centre
Clement, J. B. ..... Lester Prairie
Clifford, G. W. ..... Alexandria
§Clifton, T. A. ..... Chatfield
Closuit, F. C. ..... Aitkin
Clothier, E. F. ..... Elk River
‡Cluxton, H. F., Jr. ..... Rochester
Cochrane, B. B. ..... St. Paul
Cochrane, R. F. ..... Minneapolis
Coddon, W. D. ..... St. Paul
Cohen, B. A. ..... Minneapolis
§Cohen, S. S. ..... Minneapolis
§Colby, W. L. ..... St. Paul
§Cole, Frank ..... Duluth
§Cole, W. H. ..... St. Paul
Collet, R. W. ..... Rochester
†Collie, H. G. ..... St. Paul
Collins, A. N. ..... Duluth
†Collins, H. C. ..... Duluth
Collins, J. S. ..... Wabasha
Colp, E. A. ..... Minneapolis
Colvin, A. R. ..... St. Paul
§Combacker, L. C. ..... Fergus Falls
§Comfort, M. W. ..... Rochester
Condit, W. H. ..... Minneapolis
§Conley, F. W. ..... Rochester
§†Conner, H. M. ..... Rochester
Connery, D. B. ..... Rochester
Connolly, C. J. ..... St. Paul
§Connor, C. E. ..... St. Paul
§Cook, C. K. ..... St. Paul
§Cook, E. N. ..... Rochester
Cook, J. M. ..... Staples
Coombs, C. H. ..... Cass Lake
§Cooper, C. C. ..... St. Paul
Cooper, J. P. ..... Excelsior
Cooper, M. D. ..... Winnebago
Cooper, Talbert ..... Rochester
§Corbett, J. F. ..... Minneapolis
§Corbin, K. B. ..... Rochester
Corniea, A. D. ..... Minneapolis
§Correa, D. H. ..... Minneapolis
†Corrigan, J. E. ..... Spooner
§Cosgriff, J. A. ..... Olivia
Costin, M. E., Jr. ..... Rochester
§Coulter, E. B. ..... Minneapolis
§Counseller, V. S. ..... Rochester
§Countryman, R. S. ..... St. Paul
§Covell, W. W. ..... St. Peter
§Coventry, M. B. ..... Rochester
§Coventry, W. A. ..... Duluth
§Coventry, W. D. ..... Duluth
Covey, K. W. ..... Mahnomen
Cowan, D. W. ..... Minneapolis
†Cowern, E. W. ..... No. St. Paul
Cox, W. B. ..... Rochester
Crabtree, J. C. ..... Princeton
*Cragg, R. W. ..... Rochester
§Craig, M. S., Jr. ..... Rochester
§Craig, W. McK. ..... Rochester
§Cranmer, R. R. ..... Minneapolis
†Cranston, R. W. ..... Minneapolis
§Creevy, C. D. ..... Minneapolis
§Creighton, R. H. ..... Minneapolis
†Crewe, J. E. ..... Rochester
§Critchfield, L. R. ..... St. Paul
Crombie, F. J. ..... No. St. Paul
Cronkite, A. E. ..... Rochester
§Cronwell, B. J. ..... Austin
§Crow, E. R. ..... Ah-Gwah-Ching
§Crowley, D. F., Jr. ..... Rochester
Crump, J. W. ..... St. Paul
§Culligan, J. M. ..... St. Paul
§Culligan, L. C. ..... Minneapolis
§Culver, L. G. ..... St. Paul
Cumming, H. A. ..... Minneapolis
Cunningham, B. P., Bridgeport, Conn.
Cunningham, C. B. ..... Virginia
Cunningham, E. S., Jr., .. Rochester
§Curtis, R. A. ..... LeCenter
Custer, M. D. ..... Rochester
Cutts, George ..... Minneapolis

§Dack, L. G. ..... St. Paul
Dady, E. E. ..... Minneapolis
§Dahl, E. O. ..... Minneapolis
§†Dahl, G. A. ..... Mankato
§Dahl, J. A. ..... Minneapolis
§Dahle, M. B. ..... Glenwood
‡Dahleen, H. C. ..... Rochester
§Dahlin, D. C. ..... Rochester
Dahlin, I. T. ..... Aurora
Daignault, Oscar ..... Benson
§Dale, L. N. ..... Crosby
§Daniel, D. H. ..... Minneapolis
§Daniels, B. T. ..... Rochester
Danielson, K. A. ..... Litchfield
Danielson, Lennox ..... Litchfield
Darling, J. P. ..... Rochester
†Daugherty, E. B. .. Marine-on-St. Croix
‡Daugherty, G. W. ..... Rochester
§Daut, R. V. ..... Rochester
‡Davies, L. T. ..... Rochester
§Davis, A. C. ..... Rochester
§Davis, E. V. ..... St. Paul
Davis, I. G. ..... Rushford
§Davis, J. C. ..... Minneapolis
Davis, L. T. ..... Wadena
Davis, L. F. ..... Wadena
§Davis, R. J. .....
Richland Highlands, Wash.
‡Davis, R. M. ..... Rochester
§Davis, R. D. ..... Waseca
Davis, T. C. ..... Wadena
*†Davis, William ..... St. Paul
Davis, W. I. ..... Mound
Day, Lois A. ..... Rochester
§Dearing, W. H., Jr. ..... Rochester
§DeBoer, Hermanus ..... Edgerton
Decker, C. H. ..... St. Paul
§*DeCourcey, D. M. ..... St. Paul
§Dedolph, Karl ..... St. Paul
†Dedolph, T. H. ..... Minneapolis
‡DeForest, R. E. ..... Rochester
Delmore, J. L., Jr. ..... Roseau
§Delmore, J. L. ..... Roseau
Delmore, R. J. ..... Roseau
§del Plaine, C. W. ..... Minneapolis
§Demo, R. A. ..... Albert Lea
Demong, C. V. ..... Rochester

*†Dempsey, D. P. ..... Kellogg
§Denman, A. V. ..... Mankato
Dennis, Clarence ..... Minneapolis
§Derauf, B. I. ..... St. Paul
§Desjardins, A. U. ..... Rochester
Deterling, R. A. ..... Rochester
Deters, D. C. ..... St. Paul
§Devereaux, T. J. ..... Wayzata
Devine, K. D. ..... Rochester
Devney, J. W. ..... Rochester
DeVoe, R. W. ..... Rochester
DeWeerd, J. H., Jr. ..... Rochester
Dewey, D. H. ..... Owatonna
§Dickson, J. A., Jr. ..... Rochester
§Dickson, F. H., Jr. ..... Proctor
§Dickson, T. H. ..... St. Paul
§Diehl, H. S. ..... Minneapolis
Diessner, G. R. ..... Rochester
Diessner, H. D. ..... Minneapolis
Dille, D. E. ..... Litchfield
Dille, R. S. ..... Rochester
§*Dittman, G. C. ..... St. Paul
§Dittrich, R. J. ..... Duluth
§Dixon, C. F. ..... Rochester
§Dockerty, M. B. ..... Rochester
Dodds, W. C. ..... Thief River Falls
Doehring, P. C., Jr. ..Boston, Mass.
§Doherty, E. M. ..... New Prague
Dolder, F. C. ..... Eyota
Doman, V. W. ..... Lakefield
§Domeier, L. H. ..... New Ulm
Doms, H. C. A. ..... Slayton
§Donaldson, C. S. ..... Foley
‡Donoghue, F. E. ..... Rochester
Donohue, P. F. ..... St. Paul
Donovan, D. L. ..... Albert Lea
§Doolittle, L. E. ..... Duluth
§Dordal, J. ..... Sacred Heart
§Dorge, R. I. ..... Minneapolis
§Dornberger, G. R. ..... Rochester
§Dornblaser, H. B. ..... Minneapolis
§Dorsey, G. C. ..... Minneapolis
Douglas, J. M. ..... Rochester
Douglass, B. E. ..... Rochester
Dovre, C. M. ..... St. Paul
Dowidat, R. W. ..... Minneapolis
§Doswell, W. J. ..... Kerkhoven
Doxey, G. L. ..... Minneapolis
Doyle, G. C. ..... Duluth
§Doyle, L. O. ..... Minneapolis
§Drake, C. B. ..... St. Paul
§Drake, C. R. ..... Minneapolis
†Drake, F. A. ..... Lanesboro
Dredge, H. P. ..... Sandstone
Drexler, G. W. ..... Blue Earth
§Drill, H. E. ..... Hopkins
Drips, Della G. ..... Rochester
§Drought, W. W. ..... Fergus Falls
‡Drumheller, J. F. ..... Rochester
§Dry, T. J. ..... Rochester
§Dubbe, F. H. ..... New Ulm
DuBois, J. F. ..... Sauk Centre
§Duff, E. R. ..... Minneapolis
§Dukelow, D. A. ..... Minneapolis
DuMais, A. F. ..... Rochester
†Dumas, A. G. ..... Minneapolis
Duncan, J. W. ..... Moorhead
§Dungay, N. S. ..... Northfield
§Dunlap, E. H. ..... Minneapolis
§Dunn, G. R. ..... Minneapolis
§Dunn, J. H. ..... Rochester
§Dunn, J. N. ..... St. Paul
§DuPont, J. A. ..... Excelsior
§Duryea, W. M. ..... Minneapolis
†Dutton, C. E. ..... Minneapolis
§Dvorak, B. A. ..... Minneapolis
§Dwan, P. F. ..... Minneapolis
§Dworsky, S. D. ..... Minneapolis
§Dysterheft, A. F. ..... Gaylord

§Earl, G. A. ..... St. Paul
§Earl, J. R. ..... St. Paul
Earl, Robert ..... St. Paul
§Eaton, L. M. ..... Rochester
Eberley, T. S. ..... Benson
§Eberlin, E. A. ..... Glenwood
Ebert, R. V. ..... Minneapolis
Eckdale, J. E. ..... Marshall
§Eckman, P. F. ..... Duluth
§Eckman, R. J. ..... Duluth
Eckstam, E. E. ..... Rochester
§*Ederer, J. J. ..... Minneapolis
§Edlund, Gustaf ..... St. Paul
Edwards, Jessie E. ..... Rochester
Edwards, J. W. ..... St. Paul
†Edwards, R. T. ..... Big Fork, Mont.
§Edwards, T. J. ..... St. Paul
Eger, Alban ..... Rochester
Eginton, C. T. ..... St. Paul
§Ehrenberg, C. J. ..... Minneapolis
§Ehrlich, S. P. ..... Minneapolis
§Eich, Matthew ..... Minneapolis
Eiler, John ..... Park Rapids
Eisenstadt, D. H. ..... Minneapolis
Eisenstadt, W. S. ..... Minneapolis
§Eitel, G. D. ..... Minneapolis
§Ekblad, J. W. ..... Duluth
‡Ekstrand, L. M. ..... Wabasha
§Elias, F. J. ..... Duluth
§Elkins, E. C. ..... Rochester
Ellingson, A. R. ..... Detroit Lakes
Elliott, R. B. ..... Rochester
§Ellis, E. W. ..... Elgin
‡Ellis, F. H. ..... Rochester
Ellison, A. B. C. ..... Rochester
§Ellison, D. E. ..... Minneapolis
§Ellison, F. E. ..... Monticello
§Elsey, E. M. ..... Glenwood
Elsey, J. R. ..... Glenwood
Ely, O. S. ..... So. St. Paul
§Emanuel, K. W. ..... Duluth
§Emerson, E. C. ..... St. Paul
§Emerson, E. E. ..... Osakis
Emerson, G. F. ..... Rochester
§Emmett, J. L. ..... Rochester
Emond, A. J. ..... Farmington
Emond, J. S. ..... Farmington
§Endress, E. K. ..... St. Paul
§Engberg, E. J. ..... Faribault
§Engelhart, P. C. ..... Minneapolis
Englund, E. F. ..... Minneapolis
§Engstrand, O. J. ..... Minneapolis
Engstrom, G. F. ..... Belgrade
Enroth, O. E. ..... St. Paul
Eppard, R. M. ..... Cloquet
§Erich, J. B. ..... Rochester
§Erickson, A. O. ..... Long Prairie
Erickson, C. O. ..... Minneapolis
Erickson, D. J. ..... Minneapolis
§Erickson, Eskil ..... Halstad
§Erickson, R. E. ..... Hector
§Erickson, R. F. ..... Minneapolis
§Ericson, R. M. ..... Minneapolis
§Ericson, Swan ..... Le Sueur
Ernest, G. C. H. ..... So. St. Paul
Ersfeld, M. P. ..... St. Paul
Erskine, G. M. ..... Grand Rapids
Ertel, E. Q. ..... Ellendale
†Eshelby, E. C. ..... St. Paul
Esser, John ..... Perham
§Esser, O. J. ..... New Ulm
§Estes, J. E. ..... Rochester
§Estrem, C. O. ..... Fergus Falls
§Estrem, R. D. ..... Fergus Falls
§Estrem, T. A. ..... Hibbing
§Eusterman, G. B. ..... Rochester
§Evans, E. T. ..... Minneapolis
§Evans, L. M. ..... Sauk Rapids
Evans, R. D. ..... Minneapolis
†Evarts, A. B. ..... Rochester
Evert, J. A. ..... St. Paul
Ewens, H. B. ..... Virginia
Eyres, T. E. ..... Pequot

§Faber, J. E. ..... Rochester
§Faber, W. M. ..... Rochester
†Fahey, E. W. ..... St. Paul
Fahr, G. E. ..... Minneapolis
Fair, E. E. ..... Rochester
Fait, R. V. ..... Little Falls
§Fansler, W. A. ..... Minneapolis
Farber, E. M. ..... Rochester
†Farkas, J. V. ..... Minneapolis
†Farsht, I. J. ..... Minneapolis
Faulconer, Albert, Jr. ..... Rochester
§Fawcett, A. M. ..... Renville
§Fawcett, K. R. ..... Duluth
Fawcett, R. M. ..... Rochester
Fearing, J. E. ..... Virginia
Feeney, J. M. ..... Minneapolis
§Feinstein, J. Y. ..... Minneapolis
§Feldman, F. M. ..... Rochester
§Fellows, M. F. ..... Duluth
Fenger, E. P. K. ..... Oak Terrace
§Ferguson, J. C. ..... St. Paul
Ferguson, W. C. ..... Walnut Grove
Ferguson, W. J., Jr. ..... Rochester
‡Ferguson, W. J. ..... Rochester
Ferrell, C. R. ..... Grand Rapids
§Ferris, D. O. ..... Rochester
‡Ferris, H. A., Jr. ..... Rochester
§Fensenmaier, O. B. ..... New Ulm
§Fesler, H. H. ..... St. Paul
§Fetterly, Warren ..... Minneapolis
Field, A. H. ..... Farmington
§Figi, F. A. ..... Rochester
Fink, D. L. ..... St. Paul
§Fink, L. W. ..... Minneapolis
§Fink, W. H. ..... Minneapolis
Fisch, H. M. ..... Austin
§Fischer, M. McC. ..... Duluth
Fisher, Isadore ..... St. Paul
Fisher, J. M. ..... Willmar
Fisher, R. L. ..... Rochester
Fisketti, Henry ..... Duluth
†Fitzgerald, D. F. ..... Minneapolis
Fitzgerald, E. T. ..... Morris
§Fitzgibbons, R. J. ..... Rochester
§Fitzsimons, W. E. ..... Brainerd
§Fjeldstad, C. A. ..... Minneapolis
§Flanagan, H. F. ..... St. Paul
§Flanagan, L. G. ..... Austin
§Flasher, Jack ..... Rochester
§Flashman, F. L. ..... Rochester
Fleeson, W. H. ..... Minneapolis
§Fleming, T. N. ..... St. Cloud
§Flesche, B. A. ..... Lake City
Fletcher, Mary E. H. ..... Rochester
Flickinger, F. M. ..... Lima, Ohio
Flink, E. B. ..... St. Paul
§Flinn, J. H. ..... Rochester
Flinn, T. E. ..... Redwood Falls
§Flom, M. G. ..... Zumbrota
Flynn, B. F. ..... Hibbing
‡Foerster, J. M. ..... Rochester
‡Fogarty, C. W., Jr. ..... Rochester
Fogarty, C. W. ..... St. Paul
§Fogelberg, E. J. ..... St. Paul
§Foker, L. W. ..... Minneapolis
§Foley, F. E. B. ..... St. Paul
§Folken, F. G. ..... Albert Lea
§Ford, B. C. ..... Marshall
§Ford, W. H. ..... Minneapolis
§Forney, R. A. ..... Rochester
*Foshager, H. T. ..... Clara City
Foss, E. L. ..... Rochester
Foster, W. K. ..... Minneapolis
§Fowler, L. H. ..... Minneapolis
Fox, James R. ..... Minneapolis
§Franchere, F. W. ..... Lake Crystal
Francis, D. W. ..... Morristown
Frane, D. B. ..... Minneapolis
Frank, J. E. ..... Marshall
Frank, W. L., Jr. ..... Minneapolis
Frear, Rosemary R. ..... Minneapolis
§Fredericks, G. M. ..... Minneapolis
Frederickson, Alice C. ..... Wilmar
Frederickson, G. U. Y. ..... Willmar
§Fredlund, M. L. ..... Minneapolis
§Fredricks, M. G. ..... Duluth
Freeman, C. D. ..... St. Paul
Freeman, G. H. ..... St. Peter
Freidman, L. L. ..... St. Paul
§Freligh, W. P. ..... Albert Lea
§Fricke, R. E. ..... Rochester
§Fried, L. A. ..... Minneapolis
§Friedell, Aaron ..... Minneapolis
Friedell, George ..... Ivanhoe
Friefeld, Saul ..... Wadena
Friend, A. W. ..... Minneapolis
§Friesleben, William ..... Sauk Rapids
Frisch, F. P. ..... Wilmar
§Fritsche, Albert ..... New Ulm
§Fritsche, C. J. ..... New Ulm
§Fritsche, T. R. ..... New Ulm
Fritz, W. L. ..... St. Paul
§Froats, C. W. ..... St. Paul
§Frost, E. H. ..... Willmar
*Frost, H. T. ..... Wadena
Frost, J. B. ..... Minneapolis
Frost, R. H. ..... St. Paul
Fryfogle, J. D. ..... Rochester
Frykman, H. M. ..... Minneapolis
Fugina, G. R. ..... Mankato
Fuller, Alice H. ..... Minneapolis
§Funk, V. K. ..... Oak Terrace

§Gaarde, F. W. ..... Rochester
§Gaarde, F. W., Jr. ..... Rochester
§Gaida, J. B. ..... St. Cloud
§Gaines, E. C. ..... Buffalo Lake
§Gallagher, B. J. ..... Waseca
Galligan, Margaret M. D. ..Minneapolis
§Galloway, J. B. ..... Minneapolis
§Gambill, E. E. ..... Rochester
Gamble, J. W. ..... Albert Lea
§Gamble, P. M. ..... Albert Lea
§Gammell, J. H. ..... Minneapolis
§Garbrecht, A. W. ..... St. Paul
Gardiner, D. G. ..... St. Paul
Gardner, V. H. ..... Fairmont
§Gardner, W. P. ..... St. Paul
Garlock, A. V. ..... Bemidji
Garlock, D. H. ..... Bemidji
Garrow, D. M. ..... St. Paul
Garten, J. L. ..... Minneapolis
Garthe, J. J. ..... St. Paul
Gastineau, C. F. ..... Rochester
§Geer, E. K. ..... St. Paul
§Gehlen, J. N. ..... St. Paul
§Geist, G. A. ..... St. Paul
Gendron, J. F. ..... Grand Rapids
Gentling, A. A. ..... Rochester
Gentry, R. W. ..... Rochester
Gerber, M. P. ..... Brainerd
Gericke, J. T., Jr. ..... Glenwood
§Ghent, C. H. ..... St. Paul
§Ghormley, R. K. ..... Rochester
Ghostley, Mary C. ..... Puposky
§Gibbons, F. C. ..... Comfrey
Gibbs, E. C. ..... St. Paul

Gibbs, R. W. ..... Minneapolis
Gibson, R. H. ..... Rochester
§Giebenhain, J. N. ..... Minneapolis
§Giere, J. C. ..... Minneapolis
§Giere, R. W. ..... Minneapolis
Giere, S. W. ..... Benson
§Giesen, A. F. ..... Starbuck
†Giessler, P. W. ..... Minneapolis
‡Giffin, H. M. ..... Rochester
§Giffin, H. Z. ..... Rochester
Giffin, Mary E. ..... Rochester
Gilbert, M. G. ..... Minneapolis
†Gilfillan, J. S. ..... St. Paul
Gilkey, S. E. ..... St. Paul
*§Gilles, F. L. ..... Minneapolis
Gillespie, D. R. ..... St. Paul
§Gillespie, M. G. ..... Duluth
Gilman, L. C. ..... Willmar
Gilmore, Rowland ..... Bemidji
Gingold, B. A. ..... Minneapolis
†Ginsberg, William ..... St. Paul
§Giroux, A. A. ..... No. Mankato
§Girvin, R. B. ..... Minneapolis
§Gjerde, W. P. ..... St. Paul
Glabe, R. A. ..... Plainview
Gleason, W. A. ..... St. Paul
§Glenn, W. V. ..... Rochester
Glover, R. P. ..... Rochester
§Goblirsch, A. P. ..... Sleepy Eye
Goehrs, G. H. ..... St. Cloud
Goehrs, H. W. ..... St. Cloud
§Goldberg, I. M. ..... Minneapolis
‡Golden, P. B. ..... Rochester
Golden, R. F. ..... Rochester
§Goldish, D. R. ..... Duluth
§Goldman, T. J. ..... Minneapolis
Goldner, M. Z. ..... Minneapolis
§†Goltz, E. V. ..... St. Paul
§Good, C. A., Jr. ..... Rochester
§Good, H. D. ..... Minneapolis
§Goodman, C. E. ..... Virginia
Gordon, N. F. ..... Rochester
Gordon, P. E. ..... Minneapolis
Gorsuch, M. T. ..... Rochester
Goss, H. C. ..... Glencoe
Goss, Martha D. ..... Glencoe
§Gowan, L. R. ..... Duluth
Graham, A. W. ..... Chisholm
§Graham, F. M. ..... Rochester
Graham, R. B. ..... Rochester
Graham, R. J. ..... Rochester
§Grahek, J. P. ..... Ely
Gramse, A. E. ..... Rochester
Grant, H. W. ..... St. Paul
Grant, J. C. ..... Sauk Center
Gratzek, F. R. E. ..... Minneapolis
§Gratzek, Thomas ..... St. Paul
§Grau, R. K. ..... St. Paul
§Grave, Floyd ..... Minneapolis
§Graves, R. B. ..... Red Wing
§Graves, W. N. ..... Duluth
Gray, F. D. ..... Marshall
§Gray, H. K. ..... Rochester
Gray, R. C. ..... Minneapolis
Green, R. G. ..... Minneapolis
Greene, L. F. ..... Rochester
§Greenfield, W. T. ..... Delano
Gridley, J. W. ..... Glencoe
Griess, D. F. ..... Rochester
Griffin, J. G. ..... Rochester
§Grimes, B. P. ..... St. Peter
*Grimes, H. B. ..... Madelia
Grimes, Marian ..... Minneapolis
§Grindlay, J. H. ..... Rochester
Grinley, A. V. ..... Grand Rapids
§Grise, W. B. ..... Austin
Grogan, J. M. ..... Ceylon
Grogan, J. S. ..... Wadena
§Gronvall, P. R. ..... Minneapolis
§Groom, Dale ..... Rochester
Groschupf, T. P. ..... Bemidji
Grose, F. N. ..... Clarissa
Groskloss, H. H. ..... Minneapolis
Gross, J. B. ..... Rochester
§Grotting, J. K. ..... Rochester
Grugenhagen, A. P. ..... St. Paul
Grundset, O. J. ..... Montrose
‡Guernsey, D. E. ..... Rochester
Guilbert, G. D. ..... Wood, Wis.
Guilfoile, P. J. ..... Delano
Gullingsrud, M. J. O. ..... Oregon
Gullixson, Andrew ..... Albert Lea
§Gully, R. J. ..... Cambridge
*Gunderson, N. A. ..... Minneapolis
§Gushurst, E. G. ..... Minneapolis
§Gustason, H. T. ..... Minneapolis

§Habein, H. C. ..... Rochester
Haberer, Helen R. ..... Minneapolis
Haberman, Emil ..... Osakis
§Haes, J. E. ..... Mankato
§Hagedorn, A. B. ..... Rochester
Hagen, O. J. ..... Moorhead
Hagen, P. S. ..... Minneapolis
§Hagen, W. S. ..... Minneapolis
†Haggard, G. D. ..... Minneapolis
Haight, G. G. ..... Audubon
§†Haines, J. H. ..... Stillwater
‡Haines, R. D. ..... Rochester
§Haines, S. F. ..... Rochester
Halenbeck, P. L. ..... St. Cloud
†Hall, A. R. ..... St. Paul
§Hall, B. E. ..... Rochester
Hall, G. H., Jr. ..... Minneapolis
Hall, H B. ..... Minneapolis
Hall, H. H. ..... St. Paul
*Hall, J. M. ..... Minneapolis
§Hall, W. E. ..... Maple Lake
Hall, W. H. ..... Minneapolis
§Halladay, G. J. ..... Brainerd
Hallberg, C. A. ..... Minneapolis
§Hallberg, O. E. ..... Rochester
§Hallenbeck, D. F. ..... Rochester
§Hallenbeck, G. A. ..... Rochester
§Hallin, R. P. ..... Worthington
Halme, W. B. ..... Cloquet
Halloran, W. H. ..... Jackson
§Halpern, D. J. ..... Brewster
§Halpin, J. E. ..... Rush City
§*Hamel, A. L. ..... Minneapolis
Hamilton, C. F. ..... Rochester
§Hamlin, G. B. ..... Minneapolis
§Hamlon, J. S. ..... St. Charles
‡Hamm, R. S. ..... Rochester
§Hammermeister, T. F. ..... New Ulm
§†Hammerstad, L. M. ..... Minneapolis
§Hammes, E. M. ..... St. Paul
Hammes, E. M., Jr. ..... Rochester
Hammond, A. J. H. ..... Minneapolis
Hammond, J. F. ..... St. Paul
Haney, C. L. ..... Duluth
Hankerson, R. G. ..... Minnesota Lake
Hanlon, G. H. ..... Rochester
§Hannah, H. B. ..... Minneapolis
Hanover, R. D. ..... Littlefork
Hansbro, G. L. ..... Rochester
§Hansen, C. O. ..... Minneapolis
§Hansen, E. W. ..... Minneapolis
Hansen, Olga S. ..... Minneapolis
Hansen, T. M. ..... Alden
§Hanson, A. M. ..... Faribault
§Hanson, E. O. ..... Cloquet
Hanson, E. C. ..... New York Mills
§Hanson, H. J. ..... Minneapolis
§Hanson, H. B. ..... St. Paul
Hanson, H. V. ..... Minneapolis
§Hanson, J. W. ..... Northfield
Hanson, Lewis ..... Frost
§Hanson, M. B. ..... Minneapolis
Hanson, N. O. ..... Rochester
§Hanson, W. A. H. ..... Minneapolis
§Happe, L. J. ..... Minneapolis
Hare, Helen J. ..... Rochester
§Hargraves, M. M. ..... Rochester
§Harmon, G. E. ..... St. Paul
Harper, Harry P. ..... Rochester
Harriman, Leonard ..... Howard Lake
§Harrington, C. D. ..... Minneapolis
*§†Harrington, F. E. ..... Minneapolis
§Harrington, S. W. ..... Rochester
§Harris, C. N. ..... Hibbing
§Harrison, P. W. ..... Worthington
‡Hart, G. M. ..... Rochester
§Hart, V. L. ..... Minneapolis
§Hart, W. E. ..... Monticello
§Hartfiel, W. F. ..... St. Paul
§Hartig, Hermina A. ..... Minneapolis
Hartig, Marjorie ..... St. Paul
§Hartigan, J. D. ..... Rochester
§Hartley, E. C. ..... St. Paul
§Hartman, H. R. ..... Rochester
Hartman, Jack ..... Soudan
§Hartnagel, G. F. ..... Red Wing
§Hartung, E. H. ..... Claremont
§†Hartzell, T. B. ..... Minneapolis
Harvey, George, Jr. ..... Rochester
§Haskell, A. D. ..... Alexandria
§Hassett, M. F. ..... St. Paul
§Hassett, R. G. ..... Mankato
Hasskarl, W. F. ..... Rochester
§Hastings, D. R. ..... Minneapolis
Hastings, D. W. ..... Minneapolis
Hatch, W. E. ..... Duluth
Hatcher, A. C. ..... Rochester
Hathaway, S. J. ..... Tacoma, Wash.
Hauge, E. T. ..... Minneapolis
§Hauge, M. I. ..... Clarkfield
Haugen, J. A. ..... Minneapolis
§Hauser, V. P. ..... St. Paul
§Havel, H. W. ..... Jordan
§Haven, W. K. ..... Minneapolis
§Havens, F. Z. ..... Rochester
§Havens, J. G. W. ..... Austin
§Hawkinson, R. P. ..... Minneapolis
§Hayes, A. F. ..... St. Paul
§Hayes, J. M. ..... Minneapolis
Hayes, M. F. ..... Nashwauk
§Haynes, A. L. ..... Rochester
Hays, A. T. ..... Minneapolis
§Head, D. P. ..... Minneapolis
§Head, G. D. ..... Minneapolis
Headley, N. E. ..... Rochester
Healy, R. T. ..... Pierz
Hebbel, Robert ..... Minneapolis
Hebeisen, M. B. ..... Chaska
§Heck, F. J. ..... Rochester
§Heck, W. W. ..... St. Paul
Hedback, A. E. ..... Minneapolis
§Hedberg, G. A. ..... Nopeming
Hedemark, H. H. ..... Ortonville
Hedemark, T. A. ..... Ortonville
Hedenstrom, F. G. ..... St. Paul
§Hedenstrom, L. H. ..... Cambridge
§Hedin, R. F. ..... Red Wing
§Heersema, P. H. ..... Rochester
Hegge, O. H. ..... Austin
§Hegge, R. S. ..... Austin
Heiam, W. C. ..... Cook
§Heiberg, E. A. ..... Fergus Falls
§Heiberg, O. M. ..... Worthington
Heilman, F. R. ..... Rochester
§Heim, R. R. ..... Minneapolis
Heimark, J. J. ..... Fairmont
Heinrich, W. A. ..... Rochester
§Heise, Herbert ..... Winona
§Heise, Paul ..... Winona
§†Heise, W. F. C. ..... Winona
§Heise, W. V. ..... Winona
Helferty, J. K. ..... Minneapolis
†Helland, G. M. ..... Spring Grove
§Helland, J. W. ..... Spring Grove
§Helmholz, H. F. ..... Rochester
§Helseth, H. K. ..... Fergus Falls
§Hempstead, B. E. ..... Rochester
†Hemstead, Werner ..... Fergus Falls
§Hench, P. S. ..... Rochester
§‡Henderson, E. D. ..... Rochester
Henderson, A. J. G. ..... St. Paul
§Henderson, J. W. ..... Rochester
‡Henderson, L. L. ..... Rochester
§Henderson, M. S. ..... Rochester
Hendricks, E. J. ..... Verndale
†Hendrickson, J. F. ..... Minneapolis
Hendrickson, R. R. ..... Lake Park
§Henegar, G. C. ..... Rochester
Hengstler, W. H. ..... St. Paul
Henkel, H. B. ..... Rochester
§Henney, W. H. ..... McIntosh
§Henrikson, E. C. ..... Minneapolis
Henry, C. J. ..... Milaca
†Henry, C. E. ..... Kirksville, Mo.
Henry, M. O. ..... Minneapolis
§Hensel, C. N. ..... St. Paul
Henslin, A. E. ..... Le Roy
Henslin, M. E. ..... Le Roy
Herbert, W. L. ..... Minneapolis
§Herbst, R. F. ..... Wykoff
Herman, S. M. ..... St. Paul
§Hermanson, P. E. ..... Hendricks
§Heron, R. C. ..... St. Paul
§Herrell, W. E. ..... Rochester
§Herrmann, E. T. ..... St. Paul
§Hertel, G. E. ..... Austin
Hertz, M. J. ..... St. Paul
Hertzog, A. J. ..... Minneapolis
Hewitt, Edith S. ..... Rochester
†Hewitt, R. M. ..... Rochester
†Heyerdale, O. C. ..... Rochester
Heyerman, O. T. ..... Rochester
Higgins, J. H. ..... Minneapolis
Higgins, R. S. ..... Rochester
Higginson, J. F. ..... Rochester
Highstower, N. C., Jr. ..... Rochester
§Hilding, A. C. ..... Duluth
§Hilger, A. W. ..... St. Paul
†Hilger, D. D. ..... St. Paul
§Hilger, J. A. ..... St. Paul
§Hilger, L. D. ..... St. Paul
§Hilger, L. A. ..... St. Paul
*†Hill, Eleanor J. ..... Minneapolis
Hill, F. E. ..... Duluth
§Hill, J. R. ..... Rochester
§Hillis, S. J. ..... Minneapolis
§Hilton, H. D. ..... Rochester
Hinckley, R. G. ..... Minneapolis
§Hines, E. A., Jr. ..... Rochester
Hiniker, L. P. ..... St. Paul
§Hiniker, P. J. ..... Le Sueur
§Hinshaw, H. C. ..... Rochester
§Hinz, W. T. ..... Bird Island
Hirschboeck, F. J. ..... Duluth
§Hirshfield, F. R. ..... Minneapolis
§Hirshfield, W. S. ..... Lakefield
†Hoaglund, A. W., Santa Monica, Calif.
§Hochfilzer, J. J. ..... St. Paul
Hodapp, R. J. ..... Willmar
§Hodge, S. V. ..... Minneapolis
§Hodgson, C. H. ..... Rochester
Hodgson, J. R. ..... Rochester
§Hoeper, P. G. ..... Mankato
§Hoff, Alfred ..... St. Paul
§Hoff, H. O. ..... Duluth

†Hoffbauer, F. W. .....Minneapolis
§Hoffert, H. E. .....Minneapolis
§Hoffman, R. A. .....Minneapolis
§Hoffman, W. L. .....Minneapolis
§Hoidale, A. D. .....Tracy
Holcomb, J. T. ....Marine-on-St. Croix
Holcomb, O. W. .....St. Paul
*†Holl, P. M. .....Minneapolis
Hollenhurst, R. W. .....Rochester
Hollands, W. H. .....Fisher
Hollinshead, W. H. .....St. Paul
Holm, H. H. .....Glencoe
†Holm, P. F. .....§.....Wells
§Holmberg, C. J. .....Minneapolis
Holmberg, L. J. .....Canby
§Holmen, R. W. .....St. Paul
Holmes, A. E. .....Rush City
§Holmes, C. L. .....Rochester
Holmstrom, C. H. .....Warren
§Holt, J. E. .....St. Paul
§Holt, R. P. .....Rochester
Holtan, Theodore .....Waterville
Holzapfel, F. C. .....Minneapolis
§Hoon, J. R. .....Rochester
Hopkins, G. W. .....St. Paul
§Hoppes, E. E. .....Rochester
§Horan, M. J. .....Rochester
§Horton, B. T. .....Rochester
§Horns, Richard .....Minneapolis
Hosfeld, S. Marjorie .....Rochester
§Hottinger, R. C. .....Janesville
Houkom, Bjarne .....Minneapolis
§Houkom, S. S. .....Duluth
†House, Z. E. .....Cass Lake
Houston, D. M. .....Park Rapids
§Hovde, Rolf .....Winthrop
Hovland, M. L. .....Minneapolis
§Howard, E. G. .....Mapleton
§Howard, M. I. .....Mankato
Howard, M. A. .....St. Paul
Howard, S. E. .....Minneapolis
Howard, W. S. .....St. Paul
§Howell, L. P. .....Rochester
Hoyer, L. J. .....Windom
§Hubbard, O. E. .....Brainerd
Hubin, E. G. .....Swanville
Hudec, E. R. .....Echo
Hudson, G. E. .....Minneapolis
§Huenekens, E. J. .....Minneapolis
§Huffington, H. L. .....Mankato
Hughes, T. J. .....Rochester
§Hullsiek, H. E. .....St. Paul
§Hullsiek, R. B. .....St. Paul
Hultgen, W. J. .....St. Paul
§Hultkrans, J. C. .....Minneapolis
Hultkrans, R. E. .....Minneapolis
Humphrey, E. W. .....Moorhead
Humphrey, W. R. .....Stillwater
§Hunt, A. B. .....Rochester
Hunt, R. C. .....Fairmont
Hunt, R. S. .....Fairmont
Hunt, V. W. .....Rochester
Hunte, A. F. .....Alhambra, Calif.
Hurd, Annah .....Minneapolis
Hurley, J. P. .....Rochester
Hurwitz, M. M. .....St. Paul
Hutchins, S. P. .....Rochester
§‡Hutchinson, C. J. .....Minneapolis
Hutchinson, D. W. .....Oak Terrace
Hutchinson, Henry .....Moose Lake
Huxley, F. R. .....Faribault
§Hymes, Charles .....Minneapolis
§Hynes, J. E. .....Minneapolis

Iams, A. M. .....Minneapolis
§Ide, A. W. .....St. Paul
Ikeda, Kano .....St. Paul
Ingebrigtson, E. K. G. .....Moorhead
Ingerson, C. A. .....St. Paul
Irmisch, G. W. .....Rochester
Irons, W. E. .....Rochester
Irvine, H. G. .....Minneapolis
‡Iverson, H. A. .....Rochester
§Iverson, R. M. .....Minneapolis
Ivins, J. C. .....Rochester

§Jackman, R. J. .....Rochester
*†Jackson, C. M. .....Minneapolis
§Jackson, H. S. .....Rochester
§Jacobs, D. L. .....Willmar
Jacobs, G. C. .....Fergus Falls
Jacobs, J. C. .....Willmar
Jacobson, Clarence .....Chisholm
§Jacobson, C. W. .....Breckenridge
§Jacobson, F. C. .....Duluth
James, E. M. .....Washington, D. C.
Jamieson, E. F. .....Brainerd
Janecky, A. G. .....Warroad
Janes, J. M. .....Rochester
Janssen, M. E. .....St. Paul
‡Jennings, D. T. .....Rochester
Jensen, A. M. .....Brownton
§Jensen, H. C. .....Minneapolis
§†Jensen, M. J. .....Minneapolis

Jensen, N. K. .....Minneapolis
Jensen, R. A. .....Minneapolis
§Jensen, T. J. .....Duluth
Jesion, J. W. .....St. Paul
†Jerome, Bourne .....Minneapolis
§Jeronimus, H. J. .....Duluth
§Jessico, C. M. .....Duluth
§Joffe, H. H. .....Duluth
§Johanson, W. G. .....St. Paul
Johns, Sylvia .....Rochester
§Johnson, A. B. .....Minneapolis
Johnson, A. E. .....Minneapolis
Johnson, A. E. .....Red Wing
§Johnson, A. M. .....St. Paul
§Johnson, B. H. .....Rochester
Johnson, C. C. .....Rochester
†Johnson, C. E. .....Pine River
Johnson, C. E. .....St. Paul
*Johnson, C. M. .....Dawson
Johnson, C. P. .....Tyler
§Johnson, C. R. .....Rochester
Johnson, D. L. .....Little Falls
Johnson, E. W. .....Bemidji
Johnson, E. W. .....Minneapolis
Johnson, Evelyn V. .....Minneapolis
Johnson, H. C. .....Thief River Falls
Johnson, Hans .....Kerkhoven
§Johnson, H. A. .....Minneapolis
§Johnson, H. C. .....North Mankato
§Johnson, H. E. .....Bird Island
Johnson, J. A. .....St. Paul
§Johnson, J. A. .....Minneapolis
†Johnson, J. W. .....St. Louis Park
§Johnson, Julius .....Minneapolis
§Johnson, K. E. .....Duluth
Johnson, M. A., III .....Rochester
§Johnson, M. R. .....Minneapolis
†Johnson, N. A. ..Santa Monica, Calif.
Johnson, N. P. .....Minneapolis
Johnson, N. T. .....Minneapolis
Johnson, O. H. .....Redwood Falls
Johnson, Olga H. .....Moorhead
Johnson, O. V. .....Fergus Falls
Johnson, R. B. .....Lanesboro
Johnson, R. G. .....Stillwater
Johnson, Reuben A. .....Minneapolis
Johnson, R. E. .....Crookston
Johnson, R. E. .....Minneapolis
Johnson, R. M. .....Slayton
§Johnson, V. M. .....Dawson
Johnson, W. E. .....Morgan
Johnson, Y. T. .....Minneapolis
Johnsrud, L. W. .....Chisholm
§Johnston, L. F. .....Winona
Jolin, F. M. .....Bovey
Jondahl, W. H. .....Rochester
†Jones, A. W. .....Red Wing
Jones, E. M. .....St. Paul
Jones, H. W., Jr. .....Minneapolis
§Jones, O. H. .....Mankato
§Jones, R. H. .....Rochester
§Jones, R. N. .....St. Cloud
§Jones, W. R. .....Minneapolis
†Jordan, Kathleen .....Granite Falls
Jordan, L. S. .....Granite Falls
Josewich, Alexander .....Minneapolis
§Josewski, R. J. .....Stillwater
§Joss, C. S. .....Rochester
§Judd, E. S., Jr. .....Rochester
§Judd, W. H. .....Washington, D. C.
§Juergens, H. M. .....Belle Plaine
§Juers, E. H. .....Red Wing
§Juliar, R. O. .....St. Clair
§Jurdy, M. J. .....Minneapolis

Kabler, P. W. .....Minneapolis
Kabrick, O. A. .....Jackson
Kalin, O. T. .....Minneapolis
Kallestad, L. L. .....Brownton
§Kamman, G. R. .....St. Paul
Kamp, B. A. .....Albert Lea
Kaplan, D. H. .....St. Paul
Kaplan, J. J. .....Minneapolis
Kapsner, Carl .....Princeton
Karleen, B. N. .....Jackson
Karleen, C. I. .....Minneapolis
Karlstrom, A. E. .....Minneapolis
§Karn, B. R. .....Ortonville
§Karn, J. F. .....Ortonville
Karon, I. M. .....St. Paul
Karstens, H. C. .....Rochester
§Kasper, E. M. .....St. Paul
§Kath, R. H. .....Wood Lake
Katzovitz, Hyman .....St. Paul
Kaufman, E. J. .....Appleton
§Kaufman, H. J. .....Minneapolis
§Kaufman, W. B. .....Mankato
Kaufman, W. C. .....Appleton
§Kearney, R. W. .....Mankato
§Keating, F. R., Jr. .....Rochester
§Keating, J. U. .....Rochester
Keefe, R. E. .....St. Paul
Keeley, J. K. .....Rochester
Keffer, W. H. .....Rochester

§Keith, H. M. .....Rochester
§Keith, N. M. .....Rochester
§Keithahn, E. E. .....Sleepy Eye
§Kelby, G. M. .....Minneapolis
Kelley, K. J. .....Big Fork
§Kelly, J. F. .....Cold Springs
Kelly, J. P. .....Minneapolis
§Kelly, J. V. .....St. Paul
Kelly, P. H. .....St. Paul
§Kelsey, C. G. .....Hinckley
Kelsey, C. M. .....St. Paul
Kelsey, M. P. .....Rochester
§Kemp, A. F. .....Mankato
Kemp, M. W. .....Alton, Ill.
Kemper, C. M. .....Rochester
Kendall, R. F. .....St. Paul
§Kenefick, E. V. .....St. Paul
§Kennedy, C. C. .....Minneapolis
Kennedy, G. L. .....Faribault
Kennedy, Jane F. .....Minneapolis
§Kennedy, R. L. J. .....Rochester
Kennedy, T. J. .....Rochester
§Kennedy, W. A. .....St. Paul
Kenyon, T. J. .....St. Paul
§Kepler, E. J. .....Rochester
§Kerkhof, A. C. .....Minneapolis
Kern, C. E. .....Rochester
§Kernohan, J. W. .....Rochester
Kertesz, G. .....Minneapolis
§Kesting, Herman .....St. Paul
Kettlewell, R. B. .....Sauk Centre
Keyes, J. D. .....Winona
§Kierland, P. E. .....Alexandria
§Kierland, R. R. .....Rochester
§Kiernan, P. C. .....Rochester
§Kilbride, E. A. .....Worthington
†Kilbride, J. S. .....Worthington
§Kimmel, G. C., Jr. .....Red Wing
†King, E. A. .....Hennepin
King, F. W. .....Oak Terrace
King, G. L. .....St. Paul
*Kingsbury, E. M. .....Moose Lake
§Kinsella, T. J. .....Minneapolis
Kinsport, E. B. ..International Falls
§Kirby, J. L. .....Rochester
Kirk, G. P. .....East Grand Forks
Kirkland, W. G. .....Rochester
§Kirklin, B. R. .....Rochester
§Kirklin, O. L. .....Rochester
§Kistler, A. J. .....Minneapolis
§†Kistler, C. M. .....Minneapolis
Kleifgen, G. V. H. .....St. Paul
Klein, A. D. .....Chisholm
§Klein, Harry .....Duluth
§Klein, H. N. .....St. Paul
Klein, J. C. .....Shakopee
§Klima, W. W. .....Stewart
Klontz, C. E., Jr. .....Rochester
§Knapp, F. N. .....Duluth
§Knapp, M. E. .....Minneapolis
§†Knauff, M. K. .....St. Paul
Knight, E. G. .....Swanville
Knight, R. R. .....Minneapolis
§Knight, R. T. .....Minneapolis
‡Knisely, R. M. .....Rochester
§Knoll, W. V. .....Duluth
Knutson, G. A. .....Hallock
Knutson, G. E. .....St. Paul
‡Knutson, J. R. B. .....Rochester
§Knutson, L. A. .....Spring Grove
§Koelsche, G. A. .....Rochester
§Koenigsberger, Charles .....Mankato
§Koepcke, G. M. .....Minneapolis
§Kohlbry, C. O. .....Duluth
Kohler, D. W. .....St. Joseph
Kolars, J. J. .....Faribault
Koller, H. M. .....Minneapolis
Koller, L. R. .....Minneapolis
§Koop, S. H. .....Richmond
Korchik, J. P. .....Minneapolis
§Kortsch, F. P. .....Prior Lake
Koschnitzke, H. K. ....Minneapolis
§Kostick, W. R. .....Fertile
Kotchevar, F. R. .....Eveleth
§Koucky, R. W. .....Minneapolis
Krause, C. W. .....Fairmont
Kreilkamp, B. L. .....Rochester
Kreuzer, T. C. .....Marshall
§Krueger, V. R. .....Nopeming
§Kruzick, S. J. .....Sleepy Eye
§Krusen, F. H. .....Rochester
Kucera, F. J. .....Hopkins
§Kucera, S. T. .....Lonsdale
§Kucera, W. J. .....Minneapolis
§Kugler, A. A. .....St. Paul
Kuhlman, L. B. .....Melrose
Kurtin, H. J. .....Blooming Prairie
Kurzweg, F. T. .....Rochester
Kuske, A. W. .....St. Paul
§Kusske, A. L. .....New Ulm
§Kvale, W. F. .....Rochester
Kvitrud, Gilbert .....St. Paul

§LaBree, R. H. ..... Duluth
Lagaard, S. M. ..... Minneapolis
Laikola, L. A. ..... Adrian
§Laird, A. T. ..... Duluth
Lajoie, J. M. ..... Minneapolis
§Lake, C. F. ..... Rochester
§Lampert, E. G. ..... Rochester
Landry, R. M. ..... Rochester
§Lang, L. A. ..... Minneapolis
Langhoff, A. H. ..... St. Peter
§Lannin, B. G. ..... St. Paul
§Lannin, J. C. ..... Mabel
§Lapierre, A. P. ..... Minneapolis
§Lapierre, J. T. ..... Minneapolis
Large, H. R. ..... Rochester
Larrabee, W. F., Jr. ..... Rochester
§Larsen, C. L. ..... St. Paul
Larsen, F. W. ..... Minneapolis
Larson, Arnold ..... Detroit Lakes
§Larson, C. M. ..... Minneapolis
Larson, E. A. ..... Minneapolis
Larson, Eva-Jane ..... St. Paul
Larson, J. T. ..... St. Paul
§Larson, L. M. ..... Minneapolis
§Larson, Leonard M. ..... Oak Terrace
Larson, Leroy ..... Bagley
§Larson, M. H. ..... Nicollet
§Larson, P. N. ..... Minneapolis
Larson, R. H. ..... Anoka
§Latterell, K. E. ..... Rochester
Lauer, D. J. ..... Pittsburgh, Pa.
Laughlin, J. T. ..... Grey Eagle
§La Vake, R. T. ..... Minneapolis
Law, S. G. ..... Minneapolis
Lax, M. H. ..... St. Paul
§Laymon, C. W. ..... Minneapolis
§Leahy, Bartholomew ..... St. Paul
§Leary, W. V. ..... Rochester
§Leavenworth, R. O. ..... St. Paul
†Leavitt, H. H. ..... Minneapolis
Leavitt, M. D. ..... Rochester
LeBlanc, L. J. ..... Rochester
Lebowske, J. A. ..... Minneapolis
§Leck, P. C. ..... Austin
§Leddy, E. T. ..... Rochester
Lee, H. M. ..... Minneapolis
§Lee, H. W. ..... Brainerd
§Lee, J. B. ..... Rochester
Lee, W. N. ..... Madison
Leemhuis, G. H. ..... Aitkin
Leibold, E. F. ..... New Prague
Leibold, H. H. ..... Parkers Prairie
Leick, R. M. ..... St. Paul
§Leitch, Archibald ..... St. Paul
§Leitschuh, T. H. ..... Sanborn
Leitschuh, L. F. ..... Sleepy Eye
§Leland, H. R. ..... Minneapolis
Lemon, W. E. ..... Rochester
§Lemon, W. S. ..... Rochester
§Lenander, M. E. L. ..... St. Peter
§Lenarz, A. J. ..... Browerville
§Lende, Norman ..... Faribault
Lenont, C. B. ..... Virginia
Lenz, J. R. ..... Morton
§Lenz, O. A. ..... Minneapolis
§Leonard, L. J. ..... Minneapolis
§Leonard, Samuel ..... Minneapolis
Leopard, B. A. ..... Albert Lea
Lepak, F. J. ..... Duluth
§Lepak, J. A. ..... St. Paul
†Lerche, William ..... Cable, Wis.
§Leven, N. L. ..... St. Paul
Leverenz, C. W. ..... St. Paul
Levin, Bert ..... St. Paul
Levin, Louis ..... Rochester
Levitt, G. X. ..... St. Paul
§Lewis, A. J. ..... Henning
Lewis, C. B. ..... St. Cloud
Lexa, F. J. ..... Lonsdale
Libert, J. N. ..... St. Cloud
§Lick, C. L. ..... St. Paul
Liedloff, A. G. ..... Mankato
Lien, R. J. ..... St. Paul
§Liffrig, W. W. ..... Red Wing
§Lightbourn, E. L. ..... St. Paul
Lightfoot, Grace K. ..... Rochester
§Lilleberg, N. J. ..... St. Paul
Lillehei, E. J. ..... Robbinsdale
§Lillie, H. I. ..... Rochester
§Lillie, J. C. ..... Rochester
Lima, L. R. ..... Montevideo
Lima, L. R., Jr. ..... Montevideo
Lind, C. J. ..... Minneapolis
‡Lind, C. J., Jr. ..... Minneapolis
Lindberg, A. L. ..... Wheaton
Lindberg, A. C. ..... Minneapolis
§Lindberg, V. L. ..... Minneapolis
§Lindblom, A. E. ..... Minneapolis
§Linde, Herman ..... Cyrus
§Lindgren, R. C. ..... Minneapolis
Lindley, S. B. ..... Willmar
§Lindquist, R. H. ..... Minneapolis
§Linner, H. P. ..... Minneapolis
Lippman, E. S. ..... Minneapolis
Lippman, H. S. ..... St. Paul
Lippmann, E. W. ..... Hutchinson
§Lipschultz, Oscar ..... Minneapolis
§Lipscomb, P. R. ..... Rochester
§Litchfield, J. T. ..... Minneapolis
Litman, A. B. ..... Minneapolis
§Litman, S. N. ..... Duluth
*†Little, W. J. ..... St. Paul
§†Litzenberg, J. C. ..... Minneapolis
*†Lochead, D. C. ..... Rochester
Lofgren, K. A. ..... Rochester
§Lofsness, S. V. ..... Minneapolis
§Logan, A. H. ..... Rochester
§Logan, G. B. ..... Rochester
§Logefeil, R. C. ..... Minneapolis
§Lohmann, J. G. ..... Pipestone
§Loken, Theodore ..... Ada
§Loken, S. M. ..... St. Paul
Lombardi, A. A. ..... Rochester
§Lommen, P. A. ..... Austin
Long, Mary ..... Rochester
Longfellow, Helen B. W. ..... Brainerd
Loofbourrow, E. H. ..... Keewatin
§Loomis, E. A. ..... Minneapolis
§Loomis, G. L. ..... Winona
Loose, W. D. ..... Rochester
Love, F. A. ..... Carlos
§Love, J. G. ..... Rochester
§Lovelady, S. B. ..... Rochester
Lovett, Beatrice R. ..... Oak Terrace
§‡Lovshin, L. L. ..... Rochester
Lowe, E. R. ..... So. St. Paul
§Lowe, G. H. ..... Rochester
Lowe, T. A. ..... So. St. Paul
Lowry, Elizabeth C. ..... Minneapolis
Lowry, Thomas ..... Minneapolis
§Loyd, E. L. ..... Rochester
Luck, Hilda ..... Mankato
§Luckemeyer, C. J. ..... St. Cloud
Ludden, T. E. ..... Rochester
Luellen, T. J. ..... Rochester
§Lufkin, N. H. ..... Minneapolis
§Lund, C. J. T. ..... Fergus Falls
Lund, C. J. ..... Minneapolis
Lund, W. J. ..... Staples
Lindberg, Ruth I. ..... Minneapolis
Lundblad, R. A. ..... Minneapolis
Lundblad, S. W. ..... Minneapolis
Lundell, C. L. ..... Granite Falls
Lundgren, A. C. ..... Minneapolis
§Lundholm, A. M. ..... St. Paul
§Lundquist, E. F. ..... Minneapolis
§Lundy, J. S. ..... Rochester
§Luth, D. V. ..... Duluth
§Lyman, R. W. ..... Rochester
§Lynch, F. W. ..... St. Paul
Lynch, J. L. ..... Rochester
§Lynch, M. J. ..... Minneapolis
Lynch, R. C. ..... New Orleans, La.
§Lynde, O. G. ..... Thief River Falls
Lysne, Henry ..... Minneapolis
§Lysne, Myron ..... Minneapolis

*Macbeth, J. L. ..... St. Clair
§MacCarty, C. S. ..... Rochester
§†MacCarty, W. C. ..... Rochester
†MacDonald, A. E. ..... Minneapolis
§MacDonald, D. A. ..... Minneapolis
§Macdonald, I. D. ..... Rochester
§MacFarlane, P. H. ..... Chisholm
§Mach, F. B. ..... Minneapolis
Mack, J. J. ..... Little Rock, Ark.
MacKinnon, D. C. ..... Minneapolis
Macklin, W. E., Jr. ..... Mankato
Macklin, W. E., Jr. ..... Litchfield
§MacLean, A. R. ..... Rochester
§MacMillan, D. G. ..... Minneapolis
MacMurtrie, W. J., Jr. ..... Rochester
Macnie, J. S. ..... Minneapolis
§MacRae, G. C. ..... Duluth
Macy, Dorothy ..... Rochester
§Madden, J. F. ..... St. Paul
§Madland, R. S. ..... St. Paul
§Maeder, E. C. ..... Minneapolis
Maertz, W. F. ..... St. Paul
§Magath, T. B. ..... Rochester
§Magney, F. H. ..... Duluth
Magnuson, A. E. ..... Wheaton
§Magraw, R. M. ..... St. Paul
§Mahle, D. G. ..... Plainview
§Mahowald, A. ..... Albany
Maitland, E. T. ..... Jackson
§Maland, C. O. ..... Minneapolis
Malerich, J. A. ..... St. Paul
§Malmstrom, J. A. ..... Virginia
§Manley, J. R. ..... Duluth
§†Mann, F. C. ..... Rochester
†Manson, F. M. ..... Worthington
†Marcley, W. J. ..... Minneapolis
§Marek, F. H. ..... Rochester
Margulies, Harold ..... Rochester
§Mariette, E. S. ..... Oak Terrace
§Mark, D. B. ..... Minneapolis
Mark, Hilbert ..... Minneapolis
§Marking, G. H. ..... Minneapolis
Marks, R. W. ..... St. Paul
Marr, G. E. ..... Rochester
Marshall, Helen S. ..... Statesan, Wis.
Martens, T. G. ..... Rochester
Martin, D. L. ..... St. Paul
Martin, T. P. ..... Arlington
§Martin, W. C. ..... Duluth
§Martineau, J. L. ..... St. Paul
Martinson, C. J. ..... Wayzata
†Martinson, E. J. ..... Wayzata
Marvin, C. P. ..... Rochester
§Masson, D. M. ..... Rochester
§Masson, J. C. ..... Rochester
†Matchan, G. R. ..... Minneapolis
Matthews, Justus ..... Minneapolis
§Mattill, P. M. ..... Oak Terrace
§Mattison, P. A. ..... Winona
Mattson, A. D. ..... Madison
§Mattson, H. A. N. ..... Minneapolis
§Maxeiner, S. R. ..... Minneapolis
§Mayfield, L. H. ..... Rochester
§†Mayne, R. M. ..... Duluth
§Mayo, C. W. ..... Rochester
§Maytum, C. K. ..... Rochester
McAdams, J. B. ..... St. Paul
McAnally, A. K. ..... Rochester
§McBean, J. B. ..... Rochester
§†McCaffrey, F. J. ..... Minneapolis
McCain, D. L. ..... St. Paul
McCann, D. F. ..... Bemidji
§McCarten, F. M. ..... Stillwater
McCarthy, Donald ..... Minneapolis
McCarthy, J. J. ..... St. Paul
McCarthy, W. R. ..... St. Paul
McCartney, J. S. ..... Minneapolis
†McCarty, P. D. ..... Ely
McClanahan, J. H. ..... White Bear
McClanahan, T. S. ..... White Bear
McClellan, J. T. ..... Rochester
§McCloud, C. N. ..... St. Paul
§McConahey, W. M., Jr. ..... Rochester
†McCoy, Mary K. ..... Duluth
McCreight, W. G. ..... Rochester
‡McCrimmon, H. P. ..... Minneapolis
†McDaniel, Orianna ..... Minneapolis
McDonald, A. L. ..... Duluth
§McDonald, J. R. ..... Rochester
§McDowell, J. P. ..... St. Cloud
McEachern, C. G. ..... Rochester
§McElin, T. W. ..... Rochester
McElmeel, E. F. ..... Seattle, Wash.
McEnaney, C. T. ..... Owatonna
§McEwan, Alexander ..... St. Paul
§McFarland, A. H. ..... Minneapolis
§McGandy, R. F. ..... Minneapolis
§McGeary, G. E. ..... Minneapolis
McGroarty, J. J. ..... Easton
§McGuff, P. E. ..... Rochester
McGuigan, H. T. ..... Red Wing
§McHaffie, O. L. ..... Duluth
§McInerny, M. W. ..... Minneapolis
§McIntire, H. M. ..... Waseca
McIntyre, J. A. ..... Owatonna
McIver, B. A. ..... Lowry
McKaig, C. B. ..... Pine Island
McKelvey, J. L. ..... Minneapolis
§McKenna, J. K. ..... Austin
McKenna, M. J. ..... Grand Rapids
§McKenzie, C. H. ..... Minneapolis
McKeon, J. O. ..... Faribault
§McKinlay, C. A. ..... Minneapolis
†McKinley, J. C. ..... Minneapolis
§McKinney, F. S. ..... Minneapolis
McLane, W. O. ..... Duluth
†McLaren, Jennette M. ..... Minneapolis
McLaughlin, B. H. ..... Rochester
McLaughlin, E. M. ..... Winona
McLeod, J. L. ..... Grand Rapids
§McMahon, J. M. ..... Rochester
McMahon, M. J. ..... Green Isle
McMillan, J. T. ..... Rochester
McMurtrie, W. B. ..... Minneapolis
§McNutt, J. R. ..... Duluth
§McPheeters, H. O. ..... Minneapolis
McQuarrie, H. B. ..... Rochester
†McQuarrie, Irvine ..... Minneapolis
McVicker, J. H. ..... Rochester
Mead, C. H. ..... Duluth
§Meade, J. R. ..... St. Paul
§Mears, B. J. ..... St. Paul
§Mears, R. F. ..... Northfield
§Medelman, J. P. ..... St. Paul
Medlin, C. F. ..... Truman
§Meinert, A. E. ..... Winona
Melancon, J. F. ..... St. Paul
Melby, Benedik ..... Blooming Prairie
§Mellby, O. F. ..... Thief River Falls
Meller, R. L. ..... Minneapolis
Melzer, G. R. ..... Lyle
§Mercil, W. F. ..... Crookston
§Merkert, C. E. ..... Minneapolis
§Merkert, G. L. ..... Minneapolis
†Merrick, Charlotte T. ..... Minneapolis

†Merrill, Elisabeth ..... Minneapolis
§Merrill, R. W. ..... Morris
§Merriman, L. L. ..... Duluth
§Merritt, W. A. ..... Rochester
§Mesker, G. H. ..... Cambridge
Messler, J. D. ..... Rochester
Meyer, A. A. ..... Melrose
§Meyer, A. C. ..... Rochester
§Meyer, A. J. ..... Minneapolis
§Meyer, E. L. ..... Minneapolis
Meyer, F. C. ..... Kenyon
Meyer, J. O. ..... Grand Rapids
Meyer, L. F. ..... Faribault
Meyer, W. M. ..... Rochester
§Meyerding, E. A. ..... St. Paul
Meyerding, H. W. ..... Rochester
Meyers, W. C. ..... Rochester
Mezen, J. F. ..... Rochester
Michael, J. C. ..... Minneapolis
Michel, H. H. ..... Minneapolis
Michels, R. P. ..... Willmar
§Michelson, H. E. ..... Minneapolis
†Mickelsen, Emma F. ..... Minneapolis
§Mickelson, J. C. ..... Mankato
Milhaupt, E. N. ..... St. Cloud
Millen, F. J. ..... Rochester
§Miller, E. W. ..... Anoka
§Miller, H. E. ..... Minneapolis
Miller, Hugo E. ..... Minneapolis
§Miller, J. C. ..... Minneapolis
‡Miller, Sidney ..... Rochester
§Miller, V. I. ..... Mankato
Miller, W. A. ..... New York Mills
Mills, J. L. ..... Winnebago
§Milton, J. S. ..... Minneapolis
Minckler, J. E. ..... St. Paul
Miners, G. A. ..... Deer River
§Minsky, A. A. ..... Minneapolis
§Minty, E. W. ..... Duluth
Mitby, I. L. ..... Aitkin
Mitchell, B. D. ..... Minneapolis
Mitchell, E. C. ..... Minneapolis
Mitchell, M. T. ..... Minneapolis
§Moberg, C. W. ..... Detroit Lakes
§Moe, J. H. ..... Minneapolis
§Moe, R. J. ..... Duluth
Moe, Thomas ..... Moose Lake
§Moen, J. K., Jr. ..... Minneapolis
§Moersch, F. P. ..... Rochester
§Moersch, H. J. ..... Rochester
§Moga, J. A. ..... St. Paul
Molander, H. A. ..... St. Paul
Mollers, T. P. ..... Mountain Iron
Monahan, Elizabeth S. .. Minneapolis
Monahan, R. H., Jr., ... International Falls
Monroe, P. B. ..... Cloquet
Monserud, N. O. ..... Cloquet
§Monson, E. M. ..... Minneapolis
Montgomery, G. E. ..... Rochester
§Montgomery, Hamilton .... Rochester
§Mooney, L. P. ..... Graceville
Moos, D. J. ..... Minneapolis
Moquin, Marie A. ..... St. Paul
More, C. W. ..... Eveleth
Morehead, D. E. ..... Owatonna
Moren, Edward ..... Minneapolis
Morgan, E. H. ..... Rochester
§Morgan, H. O. ..... Amboy
Morgan, J. L. ..... Rochester
Moriarty, Berenice ..... St. Paul
Moriarty, Cecile R. ..... St. Paul
§Mork, A. H. ..... Anoka
§Mork, B. O., Jr. ..... Worthington
§Mork, B. O., Sr. ..... Worthington
§Mork, F. E. ..... Anoka
Morley, G. A. ..... Crookston
§Morlock, C. G. ..... Rochester
§Morris, D. S. ..... Rochester
Morrison, A. W. ..... Minneapolis
Morrison, Charlotte J. .. Minneapolis
Morrow, J. R. ..... Rochester
Morse, M. P. ..... Le Roy
§Morse, R. W. ..... Minneapolis
§Morseman, L. W. ..... Hibbing
Morton, R. J. ..... Rochester
§Mosby, M. E. ..... Long Prairie
§Moses, Joseph, Jr. ..... Northfield
Moses, R. R. ..... Kenyon
§Mouritsen, G. J. ..... Fergus Falls
Mueller, R. F. ..... Lincoln, Nebr.
Mueller, Selma C. ..... Duluth
Muir, W. F. ..... Browns Valley
Muller, A. E. .... North Saint Paul
§Muller, R. T. ..... St. Paul
§Mulligan, A. M. ..... Brainerd
Mulmed, E. I. ..... Rochester
§Murphy, E. P. ..... Minneapolis
§Murphy, I. J. ..... Minneapolis
Murphy, J. E. ..... Marshall
§Murphy, James E. ..... St. Cloud
‡Murphy, J. T. ..... Rochester
Murphy, M. E. ..... Rochester
Murray, R. A. ..... Hibbing
Murray, R. A. ..... Rochester
Musachio, N. F. ..... Foley
Musgrove, J. E. ..... Rochester
Mussey, Mary E. ..... Rochester
§Mussey, R. D. ..... Rochester
Mussey, Robert D., Jr. ..... Rochester
†Musty, N. J. ..... Minneapolis
§Myers, J. A. ..... Minneapolis
§Myers, T. T. ..... Rochester
Myre, C. R. ..... Paynesville

Naegeli, A. E. ..... St. Paul
§Naegeli, Frank ..... Fergus Falls
Nagel, H. D. ..... Waconia
§Nash, L. A. ..... St. Paul
§Naslund, A. W. ..... Minneapolis
Nauth, B. S. ..... Winona
§Navratil, D. R. ..... Montgomery
‡Nay, R. M. ..... Rochester
‡Neal, J. M. ..... Minneapolis
§Nealy, D. E. ..... Adrian
Neary, R. P. ..... Minneapolis
§Neel, H. B. ..... Albert Lea
Neff, W. S. ..... Virginia
§Nehring, J. P. ..... Preston
Neibling, H. A. ..... Rochester
Nelson, A. S. ....Thief River Falls
Nelson, Bernette G. ..... Menagha
Nelson, Bernice A. ..... Northome
Nelson, C. E. J. ..... Albert Lea
Nelson, E. H. ..... Chisholm
§Nelson, E. J. ..... Owatonna
Nelson, E. N. ..... Minneapolis
Nelson, H. E. ..... Crookston
§Nelson, G. E. ..... Fairfax
†Nelson, H. S. ....Los Angeles, Calif.
Nelson, K. L. ..... Clara City
§Nelson, L. A. ..... St. Paul
Nelson, L. S. ..... Hibbing
§Nelson, M. C. ..... Minneapolis
§Nelson, M. S. ..... Granite Falls
§Nelson, N. H. ..... Minneapolis
§Nelson, N. P. ..... Brainerd
§Nelson, O. L. N. ..... Minneapolis
Nelson, R. A. ..... Fergus Falls
§Nelson, R. L. ..... Duluth
§Nelson, W. I. ..... Minneapolis
§Nelson, W. O. B. ..... Fergus Falls
Nesbitt, Samuel ..... Minneapolis
§Nesheim, M. O. ..... Emmons
§Nessa, C. B. ..... St. Cloud
Nesset, L. B. ..... Minneapolis
Neumaier, Arthur ..... Glencoe
Neumann, C. A. ..... Winona
§New, G. B. ..... Rochester
§Nichols, A. E. ..... St. Paul
§Nichols, D. R. ..... Rochester
§Nicholson, M. A. ..... Duluth
‡Nickel, W. R. ..... Rochester
Nickerson, J. R. ..... Heron Lake
‡Nickeson, R. W. ..... Rochester
Nielsen, W. L. ..... Rochester
Nielson, A. M. ..... Northfield
Nietfeld, A. B. ..... Warren
§Nilson, H. J. ..... North Mankato
Ninneman, N. N. ..... Waconia
Nix, J. T. ..... Rochester
Nixon, J. B. ..... Crosby
Nixon, R. R. ..... Rochester
§Noble, J. F. ..... St. Paul
§Noble, J. L. ..... St. Paul
Nolan, D. E. ..... Dayton, Ohio
Noonan, W. J. ..... Minneapolis
§Noran, H. H. ..... Minneapolis
Norberg, C. E. ..... Cloquet
§Nord, R. E. ..... Minneapolis
§Nordin, G. T. ..... Minneapolis
Nordland, M. A. ..... Rochester
§Nordland, Martin ..... Minneapolis
Norley, Theodore ..... Rochester
§Nordman, W. F. ..... Mora
§Norman, J. F. ..... Crookston
§Norris, N. T. ..... Caledonia
§†Noth, H. W. ..... Minneapolis
Novak, E. E. ..... New Prague
Norval, M. A. ..... Rochester
Nuebel, C. J. ..... St. Paul
Nuessle, W. G. ..... Springfield
§Nuetzman, A. W. ..... Faribault
§Nutting, R. E. ..... Duluth
§Nydahl, M. J. ..... Minneapolis
Nye, Katherine A. ..... St. Paul
Nye, Lillian L. ..... St. Paul
Nygren, W. T. ..... Braham
§Nylander, E. G. ..... Minneapolis
Nystrom, Ruth G. ..... Minneapolis

§Oberg, C. M. ..... Minneapolis
O'Brien, L. T. ..... Breckenridge
O'Brien, R. W. ..... Rochester
†O'Brien, W. A. ..... Minneapolis
O'Brien, W. M. ..... St. Paul
§Ochsner, C. G. ..... Wabasha
O'Connor, D. C. ..... Eden Valley
O'Connor, L. J. ..... St. Paul
Odel, H. M. ..... Rochester
Odessky, Louis ..... Staten Island, N. Y.
§O'Donnell, D. M. ..... Ortonville
O'Donnell, J. E. ..... Minneapolis
§Oeljen, S. C. G. ..... Waseca
Oerting, Harry ..... St. Paul
§Ogden, Warner ..... St. Paul
§Ohage, Justus, Jr. ..... St. Paul
§O'Hanlon, J. A. ..... Lindstrom
O'Kane, T. W. ..... St. Paul
§O'Keefe, J. P. ..... St. Cloud
Olcott, E. D. ..... Rochester
§Olds, G. H. ..... New Richland
§O'Leary, P. A. ..... Rochester
§Oliver, I. L. ..... Graceville
§Oliver, James ..... Moorhead
§Olmanson, E. G. ..... St. Peter
§Olsen, A. M. ..... Rochester
§Olsen, E. G. ..... Minneapolis
Olsen, R. L. ..... St. Paul
Olsen, Gertrude E. ..... Georgetown
§Olson, A. C. ..... Minneapolis
Olson, A. E. ..... Duluth
§Olson, A. O. ..... Duluth
Olson, C. A. ..... St. Paul
Olson, C. J. ..... Belle Plaine
§Olson, D. O. C. ..... Gaylord
§Olson, E. A. ..... Pine Island
§Olson, G. E. ..... West Concord
Olson, J. W. ..... Minneapolis
†Olson, O. A. ..... Minneapolis
Olson, O. C. ..... Rochester
§†Olson, R. G. ..... Minneapolis
Olson, S. W. ..... Rochester
O'Neal, Ruth ..... Rochester
Onsgard, L. K. ..... Houston
§Oppegaard, C. L. ..... Crookston
§Oppegaard, M. O. ..... Crookston
§Oppen, E. G. ..... Minneapolis
§O'Reilley, B. E. ..... St. Paul
‡Osborn, J. E. ..... Rochester
Ostergaard, Erling .... Fergus Falls
§Ostergren, E. W. ..... St. Paul
Otten, D. E. ..... Minneapolis
Otto, H. C. ..... Frazee
§Ouellette, A. J. ..... St. Paul
Owen, A. C. ..... Rochester
Owens, W. A. ..... Montevideo
†Owre, Oscar ..... Minneapolis

§Paalman, R. J. ..... Rochester
§Page, R. L. ..... St. Charles
§Paine, J. R. ..... Minneapolis
Palen, B. J. ..... Minneapolis
Palmer, C. F. ..... Albert Lea
Palmer, H. A. ..... Blackduck
Palmer, J. K. ..... Rochester
Palmer, W. L. ..... Albert Lea
Palmerton, E. S. ..... Albert Lea
Pankratz, P. J. .... Mountain Lake
Parke, F. F. ..... Rochester
†Parker, O. W. ..... Duluth
§Parker, H. L. ..... Rochester
§Parker, R. L. ..... Rochester
Parker, W. E. ..... Sebeka
Parker, W. H. ..... Chisholm
Parkhill, Edith M. ..... Rochester
Parkin, T. W. ..... Rochester
Parson, E. I. ..... Duluth
Parson, Lillian B. ..... Elbow Lake
Parson, L. R. ..... Elbow Lake
Parsons, J. G. ..... Crookston
Parsons, R. L. ..... Monterey
Paschall, Jack, Jr. ..... Rochester
Pasek, A. W. ..... Cloquet
§Passer, A. A. ..... Olivia
§Patch, O. B. ..... Duluth
Patterson, H. D. ..... Slayton
Patterson, R. B. ..... Marshall
§*Patterson, W. E. ..... Minneapolis
Patterson, W. L. ..... Fergus Falls
§Paulson, E. C. ..... Elbow Lake
Paulson, G. S. ..... Evansville
Paulson, J. A. ..... Rochester
Paulson, T. S. ..... Fergus Falls
Pearsall, R. P. ..... Virginia
§Pearson, B. F. ..... Shakopee
Pearson, C. C. ..... Rochester
Pearson, D. J. ..Battle Creek, Mich.
§Pearson, F. R. ..... St. Paul
Pearson, L. O. ..... Warroad
Pearson, M. M. ..... St. Paul
Pease, Gertrude L. ..... Rochester
Peck, L. D. ..... Hastings
Peck, L. R. ..... Hastings
Pedersen, A. H. ..... St. Paul
§Pedersen, R. C. ..... Duluth
§Peltzer, W. ..... Rochester
§Pemberton, J. deJ. ..... Rochester
§Pender, J. W. ..... Rochester
Penhall, F. W. ..... Willmar
§Penk, E. L. ..... Springfield
§Penn, G. E. ..... Mankato

Pennie, D. F. ..... Duluth
§Peppard, T. A. ..... Minneapolis
Perkins, R. F. ..... Rochester
Perlman, E. C. ..... Minneapolis
§Perry, C. G. ..... St. Paul
§Perry, E. L. ..... Rochester
§Person, J. P. ..... Alden
Pertl, A. L. ..... Canby
‡Peters, G. A. ..... Rochester
Petersen, G. L. ..... Minneapolis
§†Petersen, J. R. ..... Minneapolis
§Petersen, M. C. ..... Rochester
§Petersen, P. C. ..... Mora
§Petersen, R. T. ..... St. Cloud
§Peterson, C. A. ..... Chisago City
Peterson, D. B. ..... St. Paul
Peterson, E. N. ..... Virginia
§Peterson, H. O. ..... St. Paul
Peterson, H. W. ..... Minneapolis
§Peterson, J. L. E. ..... St. Paul
Peterson, J. H. ..... Minneapolis
Peterson, J. R. ..... Rochester
Peterson, K. H. ..... Hutchinson
Peterson, L. J. ..... Minneapolis
§Peterson, N. P. ..... Minneapolis
Peterson, O. L. ..... Cokato
Peterson, O. H. ..... Minneapolis
§Peterson, P. E. ..... Minneapolis
Peterson, R. A. ..... Vesta
§Peterson, W. C. ..... Minneapolis
Peterson, W. E. ..... Willmar
Peterson, W. Henry ..... Minneapolis
§Petit, J. V. ..... Minneapolis
§Petit, L. J. ..... Minneapolis
Petraborg, H. T. ..... Aitkin
Pewters, J. T. ..... Minneapolis
Peyton, W. T. ..... Minneapolis
§Pfuetze, K. H. ..... Cannon Falls
Pfeutze, M. E. ..... Rochester
§Pfunder, M. C. ..... Minneapolis
§Phelps, K. A. ..... Minneapolis
Phillips, S. K. ..... Rochester
Pierce, C. H. ..... Wadena
§Pierce, P. P. ..... Rochester
Pierson, R. F. ..... Slayton
§Piper, M. C. ..... Rochester
§Piper, W. A. ..... Mountain Lake
Plass, H. F. R. ..... Minneapolis
§Platou, E. S. ..... Minneapolis
§Pleissner, K. W. ..... St. Louis Park
§Plimpton, N. C., Jr. ..... Minneapolis
§Plondke, F. J. ..... St. Paul
§Plummer, W. A. ..... Rochester
Pogue, R. E. ..... Watertown
§Pohl, J. F. M. ..... Minneapolis
Poirier, J. A. ..... Forest Lake
§Pollard, D. W. ..... Minneapolis
Pollard, W. H., Jr. ..... Duluth
§Polley, H. F. ..... Rochester
§Pollock, D. K. ..... Minneapolis
§*Pollock, L. W. ..... Rochester
§Polzak, J. A. ..... Minneapolis
§Ponterio, J. E. ..... Shakopee
§Pool, T. L. ..... Rochester
Poore, J. C. ..... Isle
§Poore, T. N. ..... Rochester
§Popp, W. C. ..... Rochester
Poppe, F. H. ..... Minneapolis
Porter, O. M. ..... Willmar
Potek, D. M. ..... International Falls
§Potter, R. B. ..... Minneapolis
Potthoff, C. J. ..... Washington, D. C.
§Power, J. E. ..... Duluth
§Powers, F. H. ..... Rochester
§Prangen, A. D. ..... Rochester
Pratt, F. J. ..... Minneapolis
§Pratt, J. H., Jr. ..... Rochester
Pratt, W. C. ..... Rochester
§Preine, I. A. ..... Minneapolis
Preisinger, J. W. ..... Renville
§Prendergast, H. J. ..... St. Paul
Preston, F. W. ..... Rochester
Preston, L. F. ..... Rochester
Preston, P. J. ..... Minneapolis
§Prickman, L. E. ..... Rochester
Priest, R. E. ..... Minneapolis
§Priestly, J. T. ..... Rochester
§†Prim, J. A. ..... Minneapolis
§Prins, L. R. ..... Albert Lea
Proeschel, R. K. ..... Willmar
Proffitt, W. E. ..... Minneapolis
§Proshek, C. E. ..... Minneapolis
§Pruitt, R. D. ..... Rochester
§Pugh, D. G. ..... Rochester
Pugh, P. F. H. ..... Rochester
Purves, G. H. ..... Hendricks
Pumula, E. E. ..... Minneapolis
§Puumala, R. H. ..... Cloquet
Pyle, Marjorie M ..... Rochester

§Quanstrom, V. E. ..... Brainerd
Quattlebaum, Frank ..... St. Paul
§Quello, R. O. B. ..... Minneapolis
§*†Quinby, T. F. ..... Minneapolis
§Quist, H. W. ..... Minneapolis
†Quist, H. W., Jr. ..... Minneapolis

Raadquist, C. S. ..... Hibbing
Radabaugh, R. C. ..... Hastings
§Raetz, S. J. ..... Maple Lake
Raihala, John ..... Virginia
§Raiter, R. F. ..... Cloquet
Ralph, J. R. ..... St. Paul
§Ralston, D. E. ..... Rochester
Ramsey, W. H., II ..... Rochester
†Ramsey, W. R. ..... St. Paul
Randall, A. M. ..... Ashby
§Randall, L. M. ..... Rochester
Rang, R. H. ..... Rochester
§Ransom, H. R. ..... Osseo
Ransom, M. L. ..... Hancock
Rasmussen, R. C. ..... St. Paul
§Rasmussen, W. C. ..... Rochester
§†Ratcliffe, J. J. ..... Aitkin
Rea, C. E. ..... St. Paul
Reader, D. R. ..... Minneapolis
Reed, Paul ..... Virginia
Reeve, E. T. ..... Elbow Lake
§Reff, A. R. ..... Crookston
Regan, J. J. ..... Minneapolis
§Regnier, E. A. ..... Minneapolis
Reid, L. M. ..... Excelsior
§Reif, H. A. ..... Minneapolis
§Reif, H. J. ..... St. Cloud
§Reiley, R. E. ..... Minneapolis
§†Reineke, G. F. ..... New Ulm
†Reiter, H. W. ..... Shakopee
Remington, J. H. ..... Rochester
Rempel, D. D. ..... Lester Prairie
Remsberg, R. R. ..... Tracy
Replogle, W. H. ..... Wabasha
§Reynolds, J. S. ..... Minneapolis
§Rice, C. O. ..... Minneapolis
Rice, H. G. ..... Aitkin
Rice, Roberta G. ..... Aitkin
§Richards, E. T. F. ..... St. Paul
§Richards, W. B. ..... St. Cloud
§Richardson, H. E. ..... St. Paul
Richardson, R. J. ..... St. Paul
§Richdorf, L. F. ..... Minneapolis
Rick, P. F. W. ..... St. Paul
§Ridgway, A. M. ..... Annandale
Riegel, G. S. ..... Taylors Falls
§Rieke, W. W. ..... Wayzata
Rigler, L. G. ..... Minneapolis
Ringle, O. F. ..... Walker
Riordan, Elsie M. ..... Minneapolis
Ripple, R. J. ..... New London
§Risch, R. E. ..... Minneapolis
§Risser, A. F. ..... Stewartville
§Ritchie, W. P. ..... St. Paul
§Ritt, A. E. ..... St. Paul
§Rivers, A. B. ..... Rochester
Rizer, D. K. ..... Minneapolis
Rizer, R. I. ..... Minneapolis
§*Roan, C. M. ..... Minneapolis
Roan, O. M. ..... Minneapolis
Robb, E. F. ..... Minneapolis
§†Robbins, C. P. ..... Winona
§Robbins, O. F. ..... Minneapolis
Roberts, L. J. ..... Minneapolis
Roberts, O. W. ..... Owatonna
Roberts, S. W. ..... Minneapolis
§Roberts, W. B. ..... Minneapolis
†Robertson, J. B. ..... Minneapolis
§Robertson, P. A. ..... Austin
§Robilliard, C. M. ..... Faribault
†Robinson, J. M. ..... Goshen, N. Y.
Robitshek, E. C. ..... Minneapolis
Robson, J. T. ..... Rochester
§Rodda, F. C. ..... Minneapolis
Rodgers, C. L. ..... Minneapolis
§Roehlke, A. B. ..... Elk River
§Roemer, H. J. ..... Winona
§Rogers, C. W. ..... Minneapolis
Rogers, G. E. B. ..... Minneapolis
Rogers, I. D. ..... Rochester
§Rogers, S. F. ..... St. Paul
§Rogne, W. G. ..... Spring Grove
§Roholt, C. L. ..... Waverly
Rohrer, C. A. ..... Waterville
Rokala, H. E. ..... Virginia
Rolig, D. H. ..... St. Paul
§†Rood, D. C. ..... Duluth
§Rose, J. T. ..... Lakefield
Rosenbaum, E. E. ..... Rochester
§Rosenbladt, Louis ..... Tacoma, Wash.
Rosendahl, F. G. ..... Minneapolis
Rosenfield, A. B. ..... Minneapolis
Rosenholtz, Burton ..... St. Paul
Rosenow, E. C. ..... Cincinnati, Ohio
Rosenow, J. H. ..... Rochester
§Rosenthal, F. H. ..... Austin
§Rosenthal, Robert ..... St. Paul
§Rosenwald, R. M. ..... Minneapolis
Roskilly, G. C. P. ..... Minneapolis
§Ross, A. J. ..... Minneapolis
Rossberg, R. A. ..... Morris
§Roth, F. D. ..... Lewiston
§Roth, G. C. ..... St. Paul
Rothschild, H. J. ..... St. Paul
§Roust, H. A. ..... Montevideo
Rovelstad, R. A. ..... Rochester
Rowe, O. W. ..... Duluth
Rowe, W. H. ..... Fairmont
§Rowles, E. K. ..... Coleraine
§Roy, P. C. ..... St. Paul
§Rucker, C. W. ..... Rochester
§Rucker, W. H. ..... Minneapolis
Rud, N. E. ..... Minneapolis
Rudell, G. L. ..... Minneapolis
§Rudie, P. S. ..... Duluth
Ruff, C. C. ..... Rochester
Ruggles, G. M. ..... Forest Lake
§†Ruhberg, G. N. ..... St. Paul
Rulison, E. T., Jr. ..... Rochester
Rumpf, C. W. ..... Faribault
†Rumpf, W. H. ..... Faribault
Ruona, M. A. ..... St. Paul
‡Rushton, J. G. ..... Rochester
§Russ, F. H. ..... Rochester
Russ, H. H. ..... Blue Earth
§Russeth, A. N. ..... Minneapolis
§Rusten, E. M. ..... Minneapolis
Rutherford, W. C. ..... Nisswa
Rutledge, L. H. ..... Detroit Lakes
Ryan, J. D. ..... St. Paul
§Ryan, J. J. ..... St. Paul
§Ryan, J. M. ..... St. Paul
§Ryan, M. E. ..... St. Paul
Ryan, R. E. ..... Rochester
§Ryan, W. J. ..... Duluth
§Rydburg, W. C. ..... Brooten
§Ryding, V. T. ..... Howard Lake
Rydland, A. D. ..... Crookston
Rygh, H. N. ..... Atwater
§Rynearson, E. H. ..... Rochester

Sach-Rowitz, Alvan ..... Moose Lake
§Sadler W. P., Jr. ..... Minneapolis
§Saffert, C. A. ..... New Ulm
Sahr, W. G. C. ..... Hutchinson
§St. Cyr, K. J. ..... Robbinsdale
Salassa, R. M. ..... Rochester
§Salterman, B. I. ..... Minneapolis
§*Salt, C. G. ..... Minneapolis
§Salter, R. A. ..... Virginia
§Samson, E. R. ..... Stillwater
§Samuelson, L. G. ..... Mankato
Samuelson, Samuel ..... Minneapolis
Sandell, S. T. ..... Nopeming
§Sanderson, A. G. ..... Deerwood
†Sanderson, E. T. ..... Alexandria
§Sandt, K. E. ..... Minneapolis
Sandven, N. O. ..... Paynesville
§Sanford, A. H. ..... Rochester
Sanford, J. A. ..... Farmington
Sarff, O. E. ..... Duluth
§Sarnecki, M. M. ..... St. Paul
§Satersmoen, Theodore ..... Pelican Rapids
†Sather, Allen ..... Crookston
§Sather, E. R. ..... Alexandria
Sather, G. A. ..... Fosston
Sather, R. N. ..... Mora
§Sather, R. O. ..... Crookston
§Satterlee, H. W. ..... Lewiston
Satterlund, V. L. ..... St. Paul
Sauer, W. G. ..... Rochester
§Savage F. J. ..... St. Paul
§Sawatzky, W. A. ..... Minneapolis
Sax, M. H. ..... Duluth
Sax, S. G. ..... Duluth
§Sayre, G. P. ..... Rochester
Scales, J. R. ..... Kingsville, Texas
Scanlon, R. L. ..... Rochester
§Schaaf, F. H. K. ..... Minneapolis
§Schade, F. L. ..... Worthington
Schaefer, J. F. ..... Owatonna
§Schaefer, Samuel ..... Winona
§Schaefer, W. G. ..... Minneapolis
Schafer, L. A. ..... Rochester
Schamber, W. F. ..... Parkers Prairie
Schatz, F. J. ..... St. Cloud
§Scheifley, C. H. ..... Rochester
†Scheldrup, N. H. ..... Minneapolis
§Scherer, L. R. ..... Minneapolis
Schiele, B. C. ..... Minneapolis
Schimelpfenig, G. T. ..... Chaska
§Schleinitz, F. B. ..... Battle Lake
Schlesselman, G. H. ..... Anoka
§Schlesselman, J. T. ..... Mankato
Schmidt, E. C. ..... Rochester
§Schmidt, G. F. ..... Minneapolis
§Schmidt, H. W. ..... Rochester
Schmidt, P. A. ..... Good Thunder
§Schmidt, P. G., Jr. ..... Granite Falls
§Schmidt, W. R. ..... Worthington
Schmidtke, R. L. ..... St. Paul
†Schmitt, A. F. ..... Minneapolis
†Schmitt, S. C. ..... Los Angeles, Calif.
§Schmitz, A. A. ..... Mankato
§Schmitz, E. J. ..... Holdingford

†Schneider, J. P. ..... Minneapolis
§Schneider, L. E. ..... Duluth
Schneider, P. J. ..... Adams
Schneider, R. A. ..... Minneapolis
†Schneidman, N. R. ..... Minneapolis
Schoch, R. B. J. ..... St. Paul
Scholpp, O. W. ..... Hutchinson
‡Scholten, R. A. ..... Rochester
§Schons, Edward ..... St. Paul
§Schottler, G. J. ..... Dexter
Schottler, M. E. ..... Minneapolis
§Schroder, C. H. ..... Duluth
Schroeckenstein, H. F. ..... St. Paul
§Schroeppel, J. E. ..... Winthrop
§†Schuldt, F. C. ..... St. Paul
Schultz, J. A. ..... Albert Lea
Schultz, J. H. ..... Minneapolis
§Schultz, P. J. ..... Minneapolis
§Schulze, A. G. ..... St. Paul
Schumacher, J. W. ..... St. Paul
†Schussler, O. F. ..... Minneapolis
Schutz, E. S. ..... Mountain Lake
§Schwartz, V. J. ..... Minneapolis
Schweiger, T. R. ..... Hibbing
†Schwyzer, Gustav ..... Minneapolis
§Schwyzer, H. C. ..... St. Paul
†Scofield, C. L. ..... Benson
§Scott, E. E. ..... St. Paul
†Scott, F. H. ..... Minneapolis
§Scott, H. G. ..... Minneapolis
Seaberg, J. A. ..... Minneapolis
§†Seashore, Gilbert ..... Minneapolis
Seashore, R. T. ..... St. Paul
Seebach, Lydia M. ..... Rochester
Seham, Max ..... Minneapolis
§Seifert, M. H. ..... Excelsior
§Seifert, O. J. ..... New Ulm
Seiler, H. H. ..... Rochester
Seitz, S. B. ..... Barnesville
§Seldon, T. H. ..... Rochester
§Selieskog, S. R. ..... Minneapolis
Sellers, G. K. ..... Dassel
Selmo, J. D. ..... Norwood
Selvig, H. S. ..... St. Paul
Senescall, C. R. ..... Enumclaw, Wash.
‡Sengpiel, G. W. ..... Rochester
†Senkler, G. E. ..... St. Paul
Senn, E. W. ..... Owatonna
§Serkland, J. C. ..... Rothsay
Sether, A. F. ..... Ruthton
§Setzer, H. J. ..... St. Paul
§Seybold, W. D. ..... Rochester
§Shanlorf, J. F. ..... Minneapolis
Shannon, W. R. ..... St. Paul
Shaperman, Eva P. ..... Minneapolsi
§Shapiro, M. J. ..... Minneapolis
Sharp, D. V. ..... Minneapolis
*Shastid, T. H. ..... Duluth
Shaw, A. W. ..... Virginia
Shaw, H. A. ..... Minneapolis
§Shedlov, Abraham ..... Fosston
§Sheedy, C. L. ..... Austin
§Shellito, J. G. ..... Rochester
†Shellman, J. L. ..... Pacific Palisades, Calif.
§Sheppard, C. G. ..... Hutchinson
Sher, D. A. ..... Virginia
Sheridan, Viola E. ..... Rochester
§Sherman, C. H. ..... Bayport
Sherman, C. L. ..... Luverne
§Sherman, H. T. ..... Cambridge
§Sherman, R. V. ..... Red Wing
Sherwood, G. E. ..... Kimball
§Shick, R. M. ..... Rochester
§Shimonek, S. W. ..... St. Paul
‡Shonyo, E. S. ..... Rochester
Short, C. A., Jr. ..... Rochester
Short, Jacob ..... St. Paul
Shullenberger, C. C. ..... Rochester
Sicher, W. D. ..... Rochester
Siegel, Clarence ..... St. Paul
Siegel, J. S. ..... Virginia
§Siegmann, W. C. ..... Minneapolis
Silver, J. D. ..... Minneapolis
Simison, Carl ..... Barnesville
§Simons, B. H. ..... Chaska
§Simons, F. I. ..... Swanville
†§Simons, J. H. ..... Minneapolis
§Simons, L. T. ..... St. Paul
Simonson, D. B. ..... Minneapolis
§Simonton, K. MacL. ..... Rochester
§Simpson, E. DeW. ..... Minneapolis
§Sinamark, Andrew ..... Hibbing
Singer, B. J. ..... St. Paul
Sinykin, M. B. ..... Minneapolis
Siperstein, D. M. ..... Minneapolis
Sisler, C. E. ..... Grand Rapids
†Sivertsen, Andrew ..... Nisswa
§Sivertsen, Ivar ..... Minneapolis
§Sjostrom, L. E. ..... St. Peter
‡Skillern, P. G., Jr. ..... Rochester
§†Skinner, H. O. ..... St. Paul
§Skjold, A. C. ..... Minneapolis
Skoog-Smith, A. W. ..... Mahnomen
Skroch, E. E. ..... Rochester
§Slater, S. A. ..... Worthington
Slaughter, O. L. ..... Rochester
§Slocumb, C. H. ..... Rochester
§Smisek, E. A. ..... St. Paul
§Smisek, F. M. E. ..... Minneapolis
§Smith, Adam M. ..... Minneapolis
§Smith, Archie M. ..... Minneapolis
§Smith, B. A. ..... Crosby
Smith, Baxter A., Jr. ..... Minneapolis
§Smith, C. M. ..... Duluth
Smith, F. H. ..... Rochester
§Smith, F. L. ..... Rochester
§Smith, F. R. ..... Rochester
§Smith, H. L. ..... Rochester
Smith, H. R. ..... Minneapolis
§Smith, L. G. ..... Montevideo
§Smith, L. A. ..... Balaton
Smith, L. A. ..... Rochester
Smith, Margaret I. ..... Minneapolis
†Smith, M. W. ..... Red Wing
§Smith, N. D. ..... Rochester
§Smith, N. M. ..... Minneapolis
Smith, N. R. ..... Minneapolis
§Smith, O. O., Jr. ..... Rochester
Smith, R. S. ..... Rochester
§Smith, V. D. E. ..... St. Paul
Smith, W. R. ..... Grand Marais
§Snell, A. M. ..... Rochester
Snider, G. G. ..... Rochester
Snyder, C. D. ..... Kiester
§Snyder, G. W. ..... St. Paul
Snyker, O. E. ..... Ely
Soderlind, R. T. ..... Minneapolis
§Sogge, L. L. ..... Windom
§Sohlberg, O. I. ..... St. Paul
§Sohmer, A. E. ..... Mankato
§Solhaug, S. B. ..... Minneapolis
Solsem, F. N. S. ..... Ah-Gwah-Ching
Sommer, A. W. ..... Elmore
§Sommers, Ben ..... St. Paul
§Sonnesyn, N. N. ..... Le Sueur
§Sorem, M. B. ..... St. Paul
§Sorum, F. T. ..... Jasper
§Souster, B. B. ..... St. Paul
§Spang, A. J. ..... Duluth
§Spang, J. S. ..... Duluth
§Spano, J. P. ..... Minneapolis
Spar, A. A. ..... Rochester
Spicer, F. W. ..... Duluth
§Spink, W. W. ..... Minneapolis
†Spittler, R. O. ..... New Richland
§Sprafka, J. M. ..... St. Paul
§Sprague, R. G. ..... Rochester
§Spratt, C. N. ..... Minneapolis
‡Spray, Paul ..... Rochester
Spurbeck, R. G. ..... Cloquet
Spurzem, R. J. ..... Anoka
Stahr, A. C. ..... Hopkins
Stam, John ..... Worthington
§Stanford, C. E. ..... Minneapolis
Stangl, P. E. ..... St. Cloud
§Stanley, C. R. ..... Worthington
§Starekow, M. D. ..Thief River Falls
§Stark, D. B. ..... Rochester
‡Stark, F. M. ..... Rochester
‡Starks, W. O. ..... Rochester
State, David ..... Minneapolis
Stebbins, T. L. ..... Minneapolis
§Steffens, L. A. ..... Red Wing
Stein, B. R. ..... Rochester
Stein, K. E. ..... Lakeville
Stein, R. J. ..... Pierz
§Steinberg, C. L. ..... St. Paul
§Steiner, I. W. ..... Winona
§Stelter, L. A. ..... Minneapolis
§Stemsrud, H. L. ..... Alexandria
Stennes, J. L. ..... Minneapolis
Stensgaard, K. L. ..Thief River Falls
Stenstrom, Annette E. T. ..Minneapolis
Stephan, E. L. ..... Hinckley
§Sterner, E. G. ..... St. Paul
§Sterner, E. R. ..... St. Paul
§Sterner, O. W. ..... St. Paul
§Stevens, J. E., Jr. ..... Rochester
Stevens, John ..... Gonvick
Stevenson, B. M. ..... Fulda
§Stevenson, F. W. ..... Faribault
Stewart, Alexander ..... St. Paul
Stewart, N. E. ..St. Petersburg, Fla.
§Steward, R. I. ..... Minneapolis
§Sticknev, J. M. ..... Rochester
§Stillwell, W. C. ..... Mankato
§Stillwell, G. G. ..... Rochester
*§Stinnette, S. E. ..... St. Paul
Stokes, G. D. ..... Rochester
Stoesser, A. V. ..... Minneapolis
§Stolpestad, A. H. ..... St. Paul
§Stolpestad, H. L. ..... St. Paul
†Stomel, Joseph ....Los Angeles, Calif.
Stout, H. A. ..... Rochester
Stone, S. P. ..... Minneapolis
Stover, Lee ..... Rochester
†Strachauer, A. C. ..... Minneapolis
Stransky, T. W. ..... Owatonna
§Strate, G. E. ..... St. Paul
§Strathern, C. S. ..... St. Peter
§Strathern, F. P. ..... St. Peter
Strathern, M. L. ..... Gilbert
§Stratte, A. K. ..... Pine City
Stratte, H. C. ..... Windom
Straus, M. L. ..... St. Paul
§Strauss, E. C. ..... Duluth
Street, Bernard ..... Northfield
Strem, E. L. ..... St. Paul
Strobel, W. G. ..... Duluth
§Stroebel, C. F., Jr. ..... Rochester
Strom, G. W. ..... Minneapolis
Stromgren, D. T. ..... Minneapolis
§Stromme, W. B. ..... Minneapolis
§Strong, M. L. ..... Rochester
§Strout, G. E. ..... Minneapolis
Stuart, A. B. ..... Cloquet
Stuart, R. L. ..... Rochester
§Studer, D. J. ..... Faribault
§Stuhr, J. W. ..... Stillwater
Sturley, R. F. ..... St. Paul
§Sturre, J. R. ..... Minneapolis
§Stuurmans, S. H. ..... Minneapolis
§Sukov, Marvin ..... Minneapolis
Sullivan, R. M. ..... Minneapolis
Sullivan, R. R. ..... Minneapolis
§*Sundt, Mathias ..... Minneapolis
†Sutherland, C. G. ..... Rochester
Sutherland, H. N. ..... Ely
Sutton, H. R. ..... Hoffman
§Svien, H. J. ..... Rochester
Swanson, J. A. ..... St. Paul
Swanson, R. E. ..... Minneapolis
§Swanson, R. R. ..... Albert Lea
Swanson, V. F. ..... Minneapolis
Swedberg, W. A. ..... Duluth
Swedenburg, P. A. ..... Glenwood
§Sweetser, H. B., Jr. ..... Minneapolis
†Sweetser, H. B., Sr. ..... Minneapolis
§Sweetser, T. H. ..... Minneapolis
Sweitzer, S. E. ..... Minneapolis
§†Swendseen, C. G. ..... Minneapolis
§Swendson, J. J. ..... St. Paul
§Swensen, R. G. ..... North Branch
§Swenson, A. O. ..... Duluth
§Swenson, O. J. ..... Waseca
§Swezey, B. F. ..... Buffalo

§Tangen, G. M. ..... Minneapolis
§Tanquist, E. J. ..... Alexandria
§Taylor, C. W. ..... Duluth
‡Taylor, J. C. ..... Rochester
Taylor, J. H. ..... Minneapolis
§Teich, K. W. ..... Duluth
§Teisberg, C. B. ..... St. Paul
Teisberg, J. E. ..... St. Paul
Telford, V. J. ..... Litchfield
§Tenner, R. J. ..... Minneapolis
§Terrell, B. J. ..... Nopeming
§Tesch, G. H. ..... Elk River
§Thabes, J. A. ..... Brainerd
§Thabes, J. A., Jr. ..... Brainerd
Thayer, E. A. ..... Fairmont
§Thielen, R. D. ..... St. Michael
§Thomas, G. F. ..... Minneapolis
Thomas, G. H. ..... Minneapolis
Thomas, J. F. ..... Rochester
§Thompson, Arthur ..... Cokato
Thompson, C. O. ..... Hendricks
Thompson, F. A. ..... St. Paul
§†Thompson, G. J. ..... Rochester
§Thompson, H. B. ..... Fergus Falls
Thompson, V. C. ..Marine-on-St. Croix
§Thompson, W. H. ..... Minneapolis
Thomson, J. M. ..... Minneapolis
Thoreson, M. C. Bernice ..So. St. Paul
Thorson, S. B. ..... Rochester
§Thysell, D. M. ..... Minneapolis
Thysell, F. A. ..... Moorhead
Thysell, V. D. ..... Hawley
§Tibbetts, M. H. ..... Duluth
Tice, G. I. ..... Rochester
‡Tice, W. A. ..... Rochester
Tifft, C. R. ..... St. Paul
Tilderquist, D. L. ..... Duluth
§Tillisch, J. H. ..... Rochester
§Tingdale, A. C. ..... Minneapolis
Tingdale, Carlyle ..... Hibbing
Titrud, L. A. ..... Minneapolis
Todd, R. L. ..... Minneapolis
Tofte, Josephine ..... Minneapolis
Tomlin, H. M. ..... Rochester
Tompkins, S. F. ..... Rochester
§Torgerson, W. B. ..... Oklee
Tosseland, N. E. ..... Rochester
§Trach, B. B. ..... Minneapolis
Tracht, R. R. ..... St. Paul
Traeger, C. A. ..... Faribault
Travis, J. S. ..... **St. Paul**
§Traxler, J. F. ..... Henderson
§Tregilgas, H. R. ..... So. St. Paul
Trommald, Gladys ..... Brainerd

§Troost, H. B. ..... Mankato
§Trow, J. E. ..... Minneapolis
Trow, W. H. ..... Minneapolis
Troxil, Elizabeth ..... Minneapolis
Trueman, H. S. ..... Minneapolis
Truesdale, C. W. ..... Glencoe
Trutna, T. J. ..... Silver Lake
Trytten, E. G. ..... Duluth
§Tudor, R. B. ..... Minneapolis
§Tunstead, H. J. ..... Minneapolis
§Tuohy, E. B. ..... Rochester
§Tuohy, E. L. ..... Duluth
§Turnacliff, D. D. ..... Minneapolis
Turner, J. L. ..... Rochester
§Tweedy, G. J. ..... Winona
Tweedy, J. A. ..... Winona
§Tweedy, R. B. ..... Winona
Tyler, S. H. ..... Raymond

§Ude, W. H. ..... Minneapolis
§Uhley, C. G. ..... Crookston
Uhrich, E. C. ..... Rochester
§Uihlein, Alfred ..... Rochester
Ulrich, H. L. ..... Minneapolis
§Underdahl, L. O. ..... Rochester
§Undine, C. A. ..... Minneapolis
Upshaw, Betty Y. ..... Rochester
‡Urban, D. A. ..... Rochester
§Urberg, S. E. ..... Duluth
Vadheim, A. L. ..... Tyler
Vadheim, L. A. ..... Tyler
§Valentine, W. H. ..... Tracy
§Van Cleve, H. P., Jr. ..Dodge Center
Vandersluis, C. W. ..... Bemidji
Van Herik, Martin ..... Rochester
Van Meier, Henry ..... Stillwater
Van Rooy, G. T. ..Thief River Falls
Van Valkenberg, J. D. ..... Floodwood
Varco, R. L. ..... St. Paul
Varney, J. H. ..... Rochester
Vaughan, L. M. ..... Rochester
Vaughan, V. M. ..... Truman
§Vaughn, L. D. ..... Rochester
Veirs, D. M. ..... St. Paul
Veirs Ruby J. S. ..... St. Paul
§Venables, A. E. ..... St. Paul
Veranth, L. A. ..... St. Cloud
§Vezina, J. C. ..... Mapleton
Vigran, Myron ..Los Angeles, Calif.
Vik, A. E. ..... Minneapolis
Vik, Melvin ..... Onamia
Virnig, M. P. ..... Wells
§Vogel, H. A. J. ..... New Ulm
§Vogel, J. H. ..... New Ulm
Vollmer, F. J. ..... Winona
§Von der Weyer, W. H. ..... St. Paul

§Waas, C. W. ..... St. Paul
§Wadd, C. T. ..... Janesville
§Wagener, H. P. ..... Rochester
Wagner, N. W. ..... Graceville
§Wahlquist, H. F. ..... Minneapolis
§Wakefield, E. G. ..... Rochester
§Walen, A. E. ..... Minneapolis
§Waldron C. W. ..... Minneapolis
§Walfred, K. A. ..... St. Cloud
§†Walker, A. E. ..... Duluth
§Walker, A. E. ..... St. Paul
§Wall, C. R. ..... Minneapolis
§Wallace, M. O. ..... Duluth
Waller, J. D. ..... Pine City
§Walsh, A. C. ..... Rochester
Walsh, F. M. ..... Minneapolis
Walsh, M. N. ..... Rochester
Walsh, W. T. ..... Minneapolis
§Walter, C. W. ..... St. Paul
Walter, G. F. ..... Farmington
§Walters, Waltman ..... Rochester
Wangensteen, O. H. ..... Minneapolis
‡Ward, B. H. ..... Rochester
Ward, P. A. ..... Minneapolis
§†Ward, P. D. ..... St. Paul
Warner, J. J. ..... Perham
Warren, C. A. ..... St. Paul
Warren, W. B. ..... Rochester
§Wasson, L. F. ..... Alexandria
Washko, P. J. ..... Rochester
§Watkins, C. H. ..... Rochester
Watkins, D. H. ..... Rochester
§Watson, A. M. ..... Royalton
§Watson, C. G. ..... Minneapolis
§Watson, C. J. ..... Minneapolis
†Watson, J. D. ..... Minneapolis
Watson, P. T. ..... Northfield
Watson, R. M. ....Thief River Falls
§Watson, S. W. ..... Royalton
Watz, C. E. ..... St. Paul
§Waugh, J. M. ..... Rochester
Weaver, M. M. ..... Minneapolis
§Weaver, P. H. ..... Faribault
§Webb, E. A. ..... Minneapolis
Webb, Margaret A. ..... Rochester
§Webb, R. C. ..... Minneapolis
§Webber, F. L. ..... St. Paul
§Weber, H. M. ..... Rochester
Webster, L. J. ..... Battle Lake
§Weed, L. A. ..... Rochester,
§Weir, J. F. ..... Rochester
§Weir, J. R. ..... Goodhue
§Weis, B. A. ..... St. Paul
Weisberg, Maurice ..... St. Paul
§Weiser, G. B. ..... New Ulm
Weisman, S. J. ..... Rochester
Weismann, R. E. ..... Rochester
Wellman, T. G. ..... Lake City
§Wellner, T. O. ..... Rochester
§Wells, A. H. ..... Duluth
Wells, G. R. ..... Rochester
§Wells, J. J. ..... Rochester
§Wells, W. B. ..... Jackson
§Wenner, W. T. ..... St. Cloud
§Wentworth, A. J. ..... Mankato
§Wenzel, G. P. ..... St. Paul
Wenzel, R. E. ..... Albert Lea
Werner, George ..... Minneapolis
Werner, O. S. ..... Cambridge
Werner, R. F. ..... Minneapolis
†West, Catherine C. ..... Minneapolis
§Westby, Magnus ..... Madison
Westby, Nels ..... Madison
§†Westerman, A. E. ..... Montgomery
§Westerman, F. C. ..... Montgomery
‡Westphal, K. F. ..... Minneapolis
§Westrup, J. E. ..... Lanesboro
§Wethall, A. G. ..... Minneapolis
Wetherby, Macnider ..... Minneapolis
§Wetzel, E. V. ..... Minneapolis
§Weum, T. W. ..... Minneapolis
§Wheeler, D. W. ..... Duluth
†Wheeler, M. W. ..... St. Paul
Whitacre, J. C. ..... St. Paul
White, A. A. ..... Minneapolis
White, E. F., Jr. ..... Nopeming
White, N. K. ..... Rochester
§White, S. M. ..... Minneapolis
§White, W. D. ..... Minneapolis
Whitehouse, F. R. ..... Rochester
Whitesell, F. B., Jr. ..... Rochester
§Whitesell, L. A. ..... Minneapolis
*Whitmore, F. W. ..... St. Paul
§Whitney, R. A. ..... Cambridge
§Whitson, S. A. ..... Albert Lea
Whittemore, D. D. ..... Bemidji
§Widen, W. F. ..... Minneapolis
Wiechman, F. H. ..... Minneapolis
Wilcox, A. E. ..... Minneapolis
Wilder, K. W. ..... Minneapolis
§Wilder, R. L. ..... Minneapolis
§Wilder, R. M. ..... Rochester
Wilder, R. M., Jr. ..... Minneapolis
§Wilken, P. A. ..... Minneapolis
Wilkinson, Stella L. ..... Faribault
§Wilkowske, R. J. ..... Owatonna
Will, C. B. ..... Bertha
Will, W. W. ..... Bertha
§†Willcutt, C. F. ..... Phoenix, Ariz.
Williams, A. B. ..... St. Paul
§Williams, C. A. ..... Pipestone
§Williams, C. K. ..... St. Paul
§Williams, H. L., Jr. ..... Rochester
Williams, H. O. ..... Lake Crystal
§Williams, J. A. ..... St. Paul
Williams, L. A. ..... Slayton
§Williams, M. M. ....Ah-Gwah-Ching
Williams, M. R. ..... Cannon Falls
Williams, R. V. ..... Rushford
†Williams, Robert ..... Carthage, Ill.
§Williams, R. R., Jr. ..... Rochester
§Willius, F. A. ..... Rochester
§Wilmer, H. A. ..... Rochester
Wilmot, C. A. ..... Litchfield
Wilmot, H. E. ..... Litchfield
Wilson, C. E. ..... Blue Earth
§Wilson, F. C. ..... Austin
Wilson, G. T. ..... Rochester
Wilson, J. M. ..... Rochester
§Wilson, J. A. ..... St. Paul
§Wilson, J. V. ..... St. Paul
Wilson, J. W. ..... Rochester
§Wilson, R. B. ..... Rochester
§Wilson, R. H. ..... Winona
Wilson, V. O. ..... Minneapolis
§Wilson, W. E. ..... Northfield
§†Wilson, W. F. ..... Lake City
§Wiltrout, I. G. ..... Oslo
§Winchester, W. W. ..... Rochester
Wingquist, C. G. ..... Crosby
Winnick, J. B. ..... St. Paul
Winter, J. A. ..... Duluth
Winther, Nora M. C. ..... Minneapolis
Wipperman, F. F. ..... Minneapolis
§Wise, R. W. E. ..... Rochester
§Witham, C. A. ..... Minneapolis
Withrow, M. E. ..... International Falls
Wittich, F. W. ..... Minneapolis
Wittrock, L. H. ..... Watkins
§Wohlrabe, A. A. ..... Minneapolis
§Wohlrabe, C. F. ..... No. Mankato
§Wohlrabe, E. J. ..... Springfield
§Wold, K. C. ..... St. Paul
Wold, L. E. ..... Rochester
Wolf, A. H. ..... Minneapolis
*Wolf, W. W. ..... Minneapolis
Wolff, H. J. ..... St. Paul
Wolkoff, H. J. ..... St. Paul
§Wollaeger, E. E. ..... Rochester
Wolstan, S. D. ..... Minneota
§Woltman, H. W. ..... Rochester
§Wood, H. G. ..... Rochester
‡Wood, W. D. ..... Rochester
Woodruff, C. W. ..... Chatfield
Word, H. L. ..... St. Paul
Workman, W. G. ..... Tracy
Wozencraft, J. P. ..... Rochester
Wray, W. E. ..... Campbell
§†Wright, C. D. ..... Minneapolis
*Wright, C. O. ..... Luverne
§Wright, R. H. ..... Austin
§Wright, S. G. ..... Minneapolis
Wright, W. S. ..... Minneapolis
Wunder, H. E. ..... Shakopee
Wyatt, O. S. ..... Minneapolis
Wynne, H. M. N. ..... Minneapolis

Yaeger, W. W. ..... Marshall
§Ylvisaker, R. S. ..... Minneapolis
§Yoerg, O. W. ..... Minneapolis
§Young, H. H. ..... Rochester
§Young, T. O. ..... Duluth
§Younger, L. I. ..... Winona
Youngren, E. R. ..... St. Paul

Zachman, A. H. ..... Melrose
Zachman, L. L. ..... St. Paul
Zaslow, Jerry ..... Rochester
§Zemke, E. E. ..... Fairmont
Zierold, A. A. ..... Minneapolis
§Zimmermann, H. B. ..... St. Paul
§Zinter, F. A. ..... Minneapolis
Ziskin, Thomas ..... Minneapolis
†Zlatovski, M. I. ..... Duluth
Zorn, E. L. ..... Erskine

Reports and Announcements

AMA CENTENNIAL

The annual meeting of the American Medical Association to be held in Atlantic City, June 9-13, 1947, will celebrate the 100th anniversary of the association.

The resignation of Dr. Olin West, president-elect of the AMA, because of ill health, will cause deep regrets in many quarters. The presidency of the association would have been a fitting culmination to the many years of service rendered to the national organization by Dr. West.

Announcement has been made that Dr. Edward L. Bortz, of Philadelphia, at present a vice president, will succeed Dr. West and will be inaugurated as president of the association in June.

Dr. Bortz was born in Greenberg, Pennsylvania, February 10, 1896, and now lives in Philadelphia. He became a Fellow of the American College of Physicians in 1929, was certified by the American Board of Internal Medicine in 1937, and in 1942 was made a member of the Council on Scientific Assembly of the AMA. He has been a delegate to the AMA since 1945 and is chairman of the Committee on National Emergency Medical Service of the association. During World War II, Dr. Bortz served as captain in the U. S. Naval Medical Corps.

AMERICAN CONGRESS OF PHYSICAL MEDICINE

The American Congress of Physical Medicine will hold its twenty-fifth annual scientific and clinical session September 2, 3, 4, 5 and 6, inclusive, at the Hotel Radisson, Minneapolis. Scientific and clinical sessions will be given the days of September 3, 4, 5 and 6. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

In addition to the scientific sessions, the annual instruction courses will be held September 2, 3, 4 and 5. These courses will be open to physicians and the therapists registered with the American Registry of Physical Therapy Technicians.

For information concerning the convention and the instruction course, address the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The National Gastroenterological Association will hold its 12th annual convention and scientific sessions at the Hotel Chelsea in Atlantic City, N. J., on June 4, 5, 6, 1947, affording those interested in attending the centennial celebration of the American Medical Association and the meeting of the National Gastroenterological Association a chance to be present at both.

The program will consist of eighteen papers on various phases of gastroenterology and allied subjects. Among those presenting papers will be: Dr. Manuel G. Spiesman, Chicago, Ill.; Dr. Emanuel M. Rappaport, New York, N. Y.; Dr. L. C. Sanders, Memphis, Tenn.; Dr. Herman Osgood, Boston, Mass.; Dr. James P. Campbell and Dr. Harold A. Grimm, Wheaton, Ill.; Dr. Edward T. Whitney, Boston, Mass.; Dr. F. Steigmann and Dr. Hans Popper, Chicago, Ill.; Dr. Lester M. Morrison, Los Angeles, Calif.; Dr. M. E. Steinberg, Portland, Oregon; Dr. John E. Cox, Memphis, Tenn.; Dr. George Miley, Philadelphia, Pa.; Dr. Tom D. Spies, Birmingham, Ala.; Dr. Fernando Milanes and Dr. Guillermo Garcia Lopez, Havana, Cuba, and Mr. R. Johnson, Birmingham, Ala.; Dr. Donald Cook, Chicago, Ill.; Dr. Norman Jolliffe, New York, N. Y.; Dr. Matthew T. Moore, Philadelphia, Pa.; Dr. Verne G. Burden, Philadelphia, Pa.; Dr. Thomas J. Fitz-Hugh, Jr., and Dr. A. J. Creskoff, Philadelphia, Pa.

At the luncheon round-table conference Thursday, June 5, 1947, Dr. Hyman I. Goldstein of Camden, N. J., will speak on "The History of Gastroenterology and the Development of this Specialty in America."

At the annual banquet to be held on Thursday evening, June 5, 1947, the winner of the National Gastroenterological Association's 1947 Cash Prize Award Contest for the best unpublished contribution on gastroenterology or an allied subject, will receive the prize of $100.00 and a Certificate of Merit. The guest speaker of the evening will be Dr. Homer T. Smith of the New York University College of Medicine whose subject will be "Plato and Clementine."

Program and further details may be obtained from the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

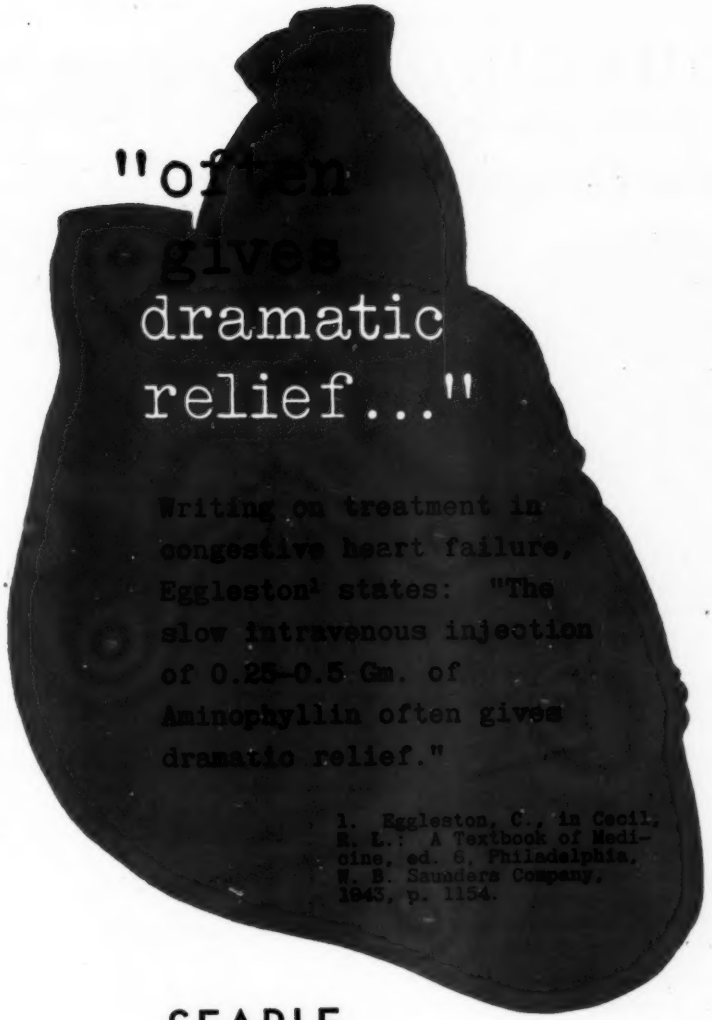
AMERICAN COLLEGE OF PHYSICIANS

During March the American College of Physicians held two one-week postgraduate courses at Rochester, one dealing with peripheral vascular disease, including hypertension, and the other concerned with rheumatic diseases. The courses were under the direction of Dr. E. V. Allen and Dr. P. S. Hench, respectively, both of Rochester. Approximately seventy-five members of the American College of Physicians came from all parts of the United States to hear lectures and discussions presented by guest speakers from throughout the nation.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

Two $100 prize awards are offered annually by the Central Association of Obstetricians and Gynecologists to any accredited physician, research worker or medical student within the confines of the Central Association, which includes Minnesota. One award is for the best investigative work, and the other for the best clinical work, in the field of obstetrics and/or gynecology. Pa-

(Continued on Page 572)



SEARLE AMINOPHYLLIN *

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*Searle Aminophyllin contains at least 80% of anhydrous theophyllin.

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

(Continued from Page 570)

pers submitted for either award must be in the hands of the secretary of the organization not later than August 15, 1947. Further information may be obtained from Dr. John I. Brewer, secretary-treasurer of the association, 104 South Michigan Avenue, Chicago, Illinois.

MINNESOTA PATHOLOGICAL SOCIETY

The regular meeting of the Minnesota Pathological Society was held in the Medical Science Amphitheater of the University of Minnesota Medical School on April 22, at 8:00 P.M. Dr. G. T. Evans and Dr. D. T. Kaung presented a discussion of the topic, "A Consideration of the Action of Insulin."

MINNESOTA SOCIETY OF NEUROLOGY AND PSYCHIATRY

Members of the Minnesota Society of Neurology and Psychiatry attended a one-day clinic-lecture conference at Rochester on May 3.

The program began at 8:00 A.M. with surgical clinics conducted by the Mayo Clinic neurosurgical staff in the operating rooms at St. Mary's Hospital. At 10:30 A.M. the lecture part of the program started. The following subjects were presented:

"Classification of Nystagmus" (with motion picture demonstration)—Dr. C. W. Rucker.

"Comments on Infantile Muscular Myopathies"—Dr. Mary E. Giffin.

"Misleading Rhythms in the Electroencephalogram in the Diagnosis of Tumors of the Brain"—Dr. R. G. Bickford.

"The Present Status of Thymectomy in the Treatment of Myasthenia Gravis"—Dr. L. M. Eaton.

"Metastatic Brain Abscess"—Dr. E. M. Gates.

At 12:30 P.M. the group was served a luncheon at the Mayo Foundation House, after which Dr. F. J. Braceland spoke on "European Neuropsychiatry."

MINNEAPOLIS SURGICAL SOCIETY

Newly elected officers of the Minneapolis Surgical Society are Dr. L. Haynes Fowler, president; Dr. Carl O. Rice, vice president; Dr. Rudolph E. Hultkrans, treasurer, and Dr. Theodore H. Sweetser, council president.

WASHINGTON COUNTY

The Washington County Medical Society met April 8, 1947, and was addressed by Dr. Oswald S. Wyatt of Minneapolis on the subject, "Appendicitis in Children."

Two visitors were present: Captain Scott Swisher, Jr., of Bayport, who was home on terminal leave and will soon begin a fourteen months' residency at the Strong Memorial Hospital at Rochester, New York, and Dr. Edgar C. Bunseth, who is now associated with Dr. G. McC. Ruggles of Forest Lake, Minnesota.

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WOMAN'S AUXILIARY

LAST CALL!

Last Call for reservations for the Twenty-fourth Annual Convention of the Woman's Auxiliary to the American Medical Association, which will be held at Haddon Hall Hotel, Atlantic City, New Jersey.

Atlantic City Extends a Hearty Welcome to You.

HENNEPIN COUNTY

To raise funds for its various philanthropies, the Woman's Auxiliary to the Hennepin County Medical Society sponsored their annual Easter Monday Benefit party at the Calhoun Beach Club on April 7. Mrs. Harold G. Benjamin was general chairman with Mrs. Ernest L. Meland as co-chairman. Mrs. C. L. Norman Nelson was in charge of tickets.

Luncheon was served at 1:30 p.m., followed by a delightful Dayton's Style Show, and a short drama entitled, "If Men Played Bridge as Women Do," presented by the North Star Drama Guild.

RAMSEY COUNTY

The Ramsey County Medical Auxiliary was the first Red Cross group in Saint Paul, working in the current drive, to complete solicitation in the campaign to raise $200,000, it was announced by Mr. Douglas K. Baldwin, Saint Paul and Ramsey County, campaign chairman.

On Monday, March 24, the Auxiliary entertained about three hundred guests at its annual guest day tea and program. Representatives of many women's organizations were present, including Mrs. Luther Youngdahl of Minneapolis and Mrs. Melvin S. Henderson of Rochester.

Preceding the tea, Dr. Raymond N. Bieter, head of the Department of Pharmacology at the University of Minnesota, talked on newly discovered drugs and how they are helping the medical profession in its fight against disease.

OLMSTED-HOUSTON-FILLMORE-DODGE COUNTY

At the quarterly meeting of the OHFD Auxiliary in March, Mrs. Russell M. Wilder, a member of the National Board on Juvenile Delinquency, and Dr. Maurice N. Walsh from the Department of Neurology at the Mayo Clinic, collaborated in presenting a program on juvenile delinquency. Officers of the Parent-Teacher Association and the principals of the city schools were invited guests. The program and discussion embraced both national and local problems and was well received.

The Auxiliary is sponsoring the cancer essay and poster awards in all Junior and Senior High Schools in the four counties.

Several members are working on the April drive for funds by the county cancer society. Small informal groups are organizing to make cancer dressings.

The Auxiliary is holding open house for the doctors' wives in the outlying counties who wish to accompany their husbands to Rochester on the evenings when the Medical Society holds its meetings.

In Memoriam

JAMES LINN ADAMS

Dr. James L. Adams, for thirty-six years a general practitioner at Morgan, Minnesota, died in March, 1947, at Van Nuys, California, whither he had moved on retiring in 1928. He was eighty-seven years old, and he and Mrs. Adams had recently celebrated their golden wedding.

Dr. Adams obtained his M.D. degree at the Missouri Medical College in 1886. He came to Morgan, Minnesota, in 1892, and prided himself on being a "real horse and buggy doctor."

In 1941, he returned to Morgan when grateful citizens unveiled a granite monument with a bronze plaque bearing his likeness in Vernon Park. The legend on the monument reads: "James L. Adams, a Pioneer Doctor. Service to His People Filled the Life of This Man, Without Thought of Personal Gain."

Dr. Adams is survived by his widow; three daughters —Frances of Long Beach, and Mildred and Marian of Carmel, California; and one son, James, Jr., of Olivia, Minnesota.

CLEMENT CAMPBELL BLAKELY

Dr. C. C. Blakely of Barnum, Minnesota, passed away on March 29, 1947, following a stroke. He was seventy-one years of age. He had practiced medicine and had been active in the social life of Barnum since 1920.

Dr. Blakely was born in Foo Chow, China, March 13, 1876, the son of Presbyterian missionaries in that field. In his early childhood, his family returned to America and lived in Neenah, Wisconsin, where he attended high school. Later, he attended Ripon College and obtained his medical degree from the University of Minnesota in 1909. After spending a year in pathology at the University, he interned at Ancker Hospital, Saint Paul, and began practicing at Saint Peter in 1911. He entered the army in 1918, serving as captain in the medical corps, 183rd Depot Brigade.

Following his discharge from the army, Dr. Blakely came to Barnum in January, 1920, looking for a location. The community, without a doctor, was in the midst of a scarlet fever epidemic, and he was induced to stay. This was two years after the disasterous Moose Lake-Kettle River forest fire, and there were still many reminders of that tragedy in ruined dwellings and burned-over woods. As a result of the fire, practice at Barnum was rather primitive. The roads being poor, the horse and buggy, bobsled, and even snow shoes were resorted to. He at one time invested in a snowmobile which would make thirty miles an hour. With the advent of the big county snowplows, the snowmobile was given up. The doctor many times had reason to be grateful to the snowplow crews who always responded promptly to a call to open up snowfilled roads, so he could reach a patient in an emergency.

During his residence at Barnum, Dr. Blakely was active in various lines of endeavor. He was a member

of the Board of Education for twelve years, serving as its president for several terms; president of the Parent-Teachers Association; trustee of the Presbyterian church for six years; and member of the Commercial Club. He was also a member of the A.F. and A.M., the IOOF, the American Legion, St. Louis County Medical Society, the Minnesota State and American Medical Associations.

Dr. Blakely was a very successful practitioner. His life was not an easy one—a country doctor's life seldom is. But he enjoyed his work and had the satisfaction of feeling that he was working for the good of mankind. As one former patient wrote, "He has fought the good fight and finished his course."

GEORGE CLAUDE DITTMAN

Dr. George C. Dittman was born in Saint Paul, Minnesota, on October 9, 1882, and died after a short illness, from heart disease, on January 9, 1947.

He attended the Webster grade school, Central High School in Saint Paul, and received his degree of doctor of medicine from the University of Minnesota in 1904. After completing his internship at Ancker Hospital in Saint Paul in 1905, he practiced for a year in South Saint Paul. Not satisfied with his work there, he went abroad and studied in his specialty in eye, ear, nose and throat diseases. He returned in 1907 and practiced his specialty for two years until 1909. At that time he became associated with his uncle, the late Dr. Joseph Bettingen, with whom he remained in partnership until Dr. Bettingen's death in 1921, after which he continued in his specialty alone until his death in January, 1947.

Dr. Dittman served in World War I in the Medical Corps. He was a member of the staff of St. Joseph's Hospital. He was an active member of the Ramsey County Medical Society, Minnesota State Medical Association, and was a Fellow of the American Medical Association.

Surviving Dr. Dittman is his sister, Miss Georgiana Dittman of Saint Paul.

KARL DEDOLPH, M.D.

FLOYD LESTER GILLES

Dr. F. L. Gilles, Minneapolis, died of a heart attack as he was entering his car in front of Fairview Hospital on April 24, 1947. He was fifty-five years of age.

Dr. Gilles was born in Sherburne, New York, May 27, 1891. He attended high school in Shortsville, New York, and obtained his medical education from Syracuse College, receiving the degrees of B.S. and M.D. in 1917. He interned at Asbury Hospital, Minneapolis, and served with the Medical Corps of the Army, being discharged in March, 1919. He was associated with Dr. A. E. Wilcox from May, 1919, until October, 1920, and has since practiced surgery, having been on the Fairview and Asbury hospital staffs.

Dr. Gilles was a past master of Khurum Lodge, A.F. and A.M., and a member of the Scottish Rite consistory, Zuhrah Temple Legion of Honor. He was also a member of the Hennepin County Medical Society, the Minnesota State and American Medical Associations.

Dr. Gilles is survived by his wife; a son, Paul Frederick of Minneapolis; a daughter, Mrs. Robert Wood of Jamestown, North Dakota; and his mother, living in New York.

CARL M. JOHNSON

The death of Dr. Carl M. Johnson on February 1, 1947, removed one of the state's leading physicians, a valued Councilor of the State Medical Association, and an outstanding citizen of Dawson, Minnesota.

Carl Johnson was born July 27, 1882, on a farm northwest of Pelican Rapids, a spot chosen by his father, John M. Johnson, when he came to that region as the first settler.

It is always a matter for debate whether environment or heredity is most important in formation of character; this in his case was settled, by giving him both. His parents were outstanding citizens for over fifty years —very successful farmers, pillars of the church, and his father's advice was sought by large numbers throughout his long life. Carl carried these ideals absorbed in youth to the end.

Carl Johnson was educated in the Park Region Lutheran College, Fergus Falls; Hamline University, and the University of Minnesota, graduating in medicine in 1910. He interned in St. Barnabas Hospital, and took postgraduate work in New York. Following this, he was associated with Dr. L. G. Smith, Montevideo, until 1916, when he joined his brother, Herman, in Dawson.

This partnership was ideal. Most, who know, agree that Herman was one of Minnesota's great men, possessing a remarkable mind, fine judgment, unlimited drive, high ideals and character. Herman would have dominated anywhere he chose, but was satisfied in giving his community the best in medical and surgical service, leading the citizens on the right road in civil and political affairs, and acting as an outstanding advisor to the Minnesota State Medical Association; refusing through his whole life to accept public office.

Carl, though having equal ability, was Herman's complement—thoughtful, very slow in making a decision, kindly and deliberate, never irritable. It was Carl who always had time to discuss problems with anyone in the city or hospital, thus becoming the greatly valued advisor of the community. Though generous, he was wise in finance; at the time of his death being president of the Northwestern State Bank of Dawson, president of the City Council, and chief of staff of the Dawson Community Hospital.

The high standards set by Herman and Carl will be carried on by two cousins and Dr. J. G. Boody, a valued partner in practice for many years.

Vilhem (Bill), Herman's son, who greatly distinguished himself in the last war, becoming a Major, is now carrying the chief burden. He will soon be joined by Curtis, Carl's son, who is now finishing his internship.

Besides Curtis, Carl leaves Douglas and Dorothea, fine young people still in college, and Mrs. Johnson, formerly Anna Loberg.

It can be said that Carl lived a full and useful life, dying with as few reasons for regrets as it is humanly possible.

W. L. Burnap.

LEE W. POLLOCK

Dr. Lee W. Pollock, head of the sections of medicine at the Mayo Clinic at Rochester, died following a stroke February 2, 1947.

Dr. Pollock was born at Evansville, Minnesota, February 7, 1887. He attended high school at Rochester and for fifteen months after graduation he worked in the laboratory at St. Mary's Hospital under the tutelage of Dr. L. B. Wilson. His interest in laboratory work continued and while he was an undergraduate at the University of Minnesota his spare hours and summer vacations throughout his course were spent in the pathologic laboratory under Dean F. F. Wesbrook, Dr. H. E. Robertson, Dr. R. H. Mullin and others. He received the degrees of B. S. in 1911 and M.D. in 1912 from the University of Minnesota. After an internship in City and County Hospital (later Ancker), St. Paul, he practiced in Warren, Minnesota, for about a year and then went to the Mayo Clinic in November, 1914. During World War I he was a first lieutenant and served on the Board of Examiners for tuberculosis in various army camps. He returned to the clinic and in 1925 was made head of a section. He was also an assistant professor of medicine in the Mayo Foundation.

In the clinic his work was always associated with Dr. A. H. Logan and for a number of years he performed the proctoscopic examinations and supervised the tedious treatment of ulcerative colitis and other medically treated colon conditions.

Because of his persistence in his diagnostic work and his refusal to dismiss a patient until he himself was satisfied, his pleasant personality and his patience, a great number of patients always sought him on their return visits. He was a great reader on medical subjects and always purchased his own books so that he could utilize any free moments available from the care of his patients. He was considered a good teacher by the fellows who were fortunate enough to come under his influence and he wrote well but infrequently. His rather retiring disposition deterred him from participating in medical meetings.

His hobbies were numerous. As a student his chief delight was playing baseball, and after college he was an ardent follower of the University of Minnesota football team. He always liked dogs and owned several good ones. In 1926 he acquired some wooded hillside land in the outskirts of Rochester and on this project expended much energy and satisfied several urgent impulses to produce the best of whatever he undertook. He had chickens, and being on the dietetic committee of the clinic he early used his training to formulate a ration for his laying hens which produced satisfying results in growth of the birds and egg production. In 1926 crude cod liver oil was added to the chicken mash as well as the milk fed to his prize Jersey calves. During the year preceding his death, his few excellently bred Jersey cows topped the county records in milk production and butterfat.

He always loved to see things grow. His interest began with apples and plums, continued on into iris, lilacs and gladiolus. His greatest effort was in his prize peonies. On his small plat of land there were between 6,000

and 7,000 plants with more than 500 named varieties. Many prizes were acquired for his beautiful blooms at the peony shows.

He married Addie Baihly of Rochester on June 14, 1916, and is survived by his wife and a sister, Mrs. Frank Jacobs, of Rochester, and a host of friends.

He was a member of the Southern Minnesota Medical Association, the American Medical Association, the Alumni Association of the Mayo Foundation and Sigma Xi.

THOMAS HALL SHASTID

Dr. Thomas H. Shastid, a practicing ophthalmologist and author in Duluth since 1920, died February 15, 1947, at the age of eighty.

Born in Pittsfield, Illinois, July 19, 1866, Dr. Shastid attended the local schools and Eureka College, Illinois. He obtained his medical education at Columbia University and the University of Vermont, obtaining his M.D. degree in 1888. He also obtained a B.A. degree from Harvard in 1893, an M.A. from the University of Michigan in 1901, and an LL.B. from the same university in 1902. Postgraduate work was taken also at the Postgraduate Medical School in New York and in Vienna on two occasions.

Dr. Shastid was indeed a remarkable individual, and during his long life he took an active and combative interest in anything and everything pertaining to medicine and to his chosen specialty of eye, ear, nose and throat. For many years he assisted in the editing and the collecting of data pertaining to the American Encyclopedia of Ophthalmology and its publication.

Prior to coming to the Head of the Lakes (Superior and Duluth) he traveled about considerably, and practiced in several cities of Illinois: Pittsfield, Galesburg, Fairfield, Charleston and Marion. He is credited with more than 3,000 publications. Two thick tomes, copiously illustrated, dealing with what he called his "first and second lives," were published by him. Much of the information concerned in these books is extremely personal but it has considerable historical value because it connotes the gradual development of medicine in its various fields within that extensive period of sixty years in which he was student, practitioner, teacher and specialist. Not a little of the material covered in these books illustrates the limitless bickering and argument, not to say controversy, written and spoken just prior to the turn of the century, when doctors were finding their way to more congenial associations and the medical societies to more scientific pursuits. As an author, he went into great detail concerning his own confusing illnesses and the variety of approaches and diagnostic impressions, as, for example, when violent indigestion persecuted him at great length, only to be ultimately solved by an abdominal operation and an exploration. In later years he had a great fear of "sinus disease." He would frequently attend a medical meeting, where the air in the room was never too satisfactory, wearing a heavy fur cap pulled well down over his ears because, as he stated, "the slightest cold drives me fran-

tic." His writing was by no means confined to medical fields, and one of his books, *Simon of Cyrene,* was very well received and had excellent mention from the critics about two decades ago.

His habits of living in later years became intensely individual. He arose about noon, and then went to his office, where he saw many people, for he had developed an unusual reputation in rather complicated optometry. In addition, he had some unusual avocations. One of these was to go out to the zoo and make ophthalmoscopic examinations of the various animals, including fish, birds, snakes, and in fact any other living creature submitting to approach. He made extensive contributions relative to the pupil, both of human beings and animals.

SHELBY E. STINNETTE

Dr. Shelby E. Stinnette died March 27, 1947, in Los Angeles, California. The cause of death was coronary thrombosis, complicated by cerebral thrombosis.

Dr. Stinnette was born August 10, 1886, at Louisville, Kentucky. He was graduated from the Louisville Male High School in 1907, the Kentucky School of Pharmacy in 1909, and Hahnemann Medical College of Chicago in 1913, following which he came to Saint Paul.

He was first associated with Dr. S. G. Cobb at 365 Prior Avenue. In 1920 he opened offices with Dr. Hugh Beals at 322 Hamm Building, where he continued to practice until his retirement in 1946.

He was a member of Ramsey County Medical Society and Minnesota State Medical Association, Triune Lodge No. 190, A.F. and A.M.; Palmyra Chapter No. 55, Royal Arch Masons; the Saint Paul Athletic Club, Kiwanis Club, the Automobile Club and the Midway Club. He was a trustee of Trinity Methodist Church and a staff member of Midway and Bethesda Hospitals.

Dr. Stinnette was a man devoted to his family and his patients, as they were to him. He lived cleanly and honestly, and from those who knew him he achieved an affection which is given to few men. He loved his home and was a genial and charming host. He loved the out-of-doors, and there could be no better fishing or hunting companion. He was a faithful servant of his church. These things made him an outstanding member of his profession.

He is survived by his wife; two daughters, Mrs. W. D. Schmidt of Saint Paul, and Mrs. H. F. Wilenchek of Atlanta, Ga.; two brothers, a sister, and four grandchildren.

There is peculiar pathos in the fact that Dr. Beals, with whom Dr. Stinnette shared offices for twenty-six years chanced to be near when Dr. Stinnette was stricken and was in constant attendance during the last days of his illness.

CHARLES C. COOPER, M.D.

Of General Interest

On March 29, Dr. Paul R. Lipscomb and Dr. G. B. Logan, Rochester, participated in a clinic for crippled children at Worthington.

* * *

Dr. H. H. Albrecht Lindstrom, purchased the Chisago Lakes Clinic in Chisago City, March 14, taking over the interests of Dr. C. A. Peterson.

* * *

A recent addition to the staff of the River Falls Clinic is Dr. R. R. Davis, formerly of Wisconsin General Hospital, Madison, Wisconsin.

* * *

Dr. Henry J. Wynsen, after a year's residency in medicine at Ancker Hospital, Saint Paul, has entered a residency in pathology at St. Mary's Hospital, Duluth.

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Dr. T. R. Fritsche, New Ulm, was elected president of the Minnesota Academy of Ophthalmology and Otolargngology at a meeting held in Minneapolis on March 14.

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Dr. J. C. Crabtree and Dr. Alfred Kapsner, Princeton, have purchased the former Ewing Building in that city and are having it remodeled to house a new medical clinic.

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After nine years of medical and surgical practice in Two Harbors, Dr. Roland F. Mueller has moved to Lincoln, Nebraska, where he is now a surgeon with the Olney Clinic.

* * *

While Dr. N. F. Musachio, Foley, attended a short course in surgery in Chicago, Illinois, in late March, his practice was conducted by Dr. John H. O'Leary, formerly of Minneapolis.

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At a meeting of the Chicago Medical Society in Chicago in the early part of March, Dr. H. W. Meyerding, Rochester, received the first award for his scientific exhibit on "Benign and Malignant Tumors of Bone."

* * *

Speaking at a Rotary Club meeting in Fergus Falls on March 12, Dr. H. K. Helseth of that city pointed out the disadvantages of socialized medicine by discussing the reasons for which the medical and dental professions are opposed to medical regimentation.

* * *

Dr. Victor Johnson, recently appointed director of the Mayo Foundation, to take office in October, has arrived in Rochester and has joined the staff of the Foundation as professor of physiology, in order to begin the task of learning the duties of director.

* * *

Seven army medical officers are attending continuation courses this spring at the University of Minnesota, it was recently announced. When the officers' training is completed, they will assist the army in setting up basic science courses at service hospitals for the training of regular officers in the various specialties.

* * *

Dr. Gordon R. Kamman, Saint Paul, addressed the Polk County (Wisconsin) Medical Society at its monthly meeting held in Stillwater on March 20. Dr. Kamman's subject was "Neuropsychiatry in General Office Practice."

* * *

During the annual meeting of the American Medical Association in Atlantic City, the Alumni Association of the Jefferson Medical College will hold a smoker at the Traymore Hotel, Atlantic City, on Wednesday, June 11, 1947.

* * *

Speaking at the Surgeon General's Conference at Walter Reed General Hospital in Washington, D. C., March 20, was Dr. F. H. Krusen, Rochester, who discussed "The Developments of the Modern Era of Physical Medicine as Observed During the Past Two Decades."

* * *

Dr. Carleton W. Leverenz has become associated with Dr. Harry Oerting, with offices at 914 Lowry Medical Arts Building, Saint Paul, specializing in internal medicine. A graduate of the University of Illinois, Dr. Leverenz served his internship and a residency at Ancker Hospital, Saint Paul.

* * *

Dr. A. M. Snell, Rochester, spoke at the April 7 meeting of the Hennepin County Medical Society on the subject, "Some Clinical and Physiologic Aspects of Portal Cirrhosis." While in Minneapolis, he also was a speaker at the University of Minnesota Center for Continuation Study, where his topic was "Some Current Problems in the Field of Gastronenterology."

* * *

At the eleventh annual meeting of the Saint Paul Surgical Society, held April 19 at the Minnesota Club in Saint Paul, 158 members and guests of the society heard Dr. Karl Meyer, professor of surgery at Northwestern University Medical School, speak on the subject, "The Early Ambulatory Treatment of the Postoperative Patient."

* * *

April showered lecture duties upon Dr. Philip S. Hench, Rochester, who started the month by journeying to Portland, Oregon, to deliver three Sommer Memorial lectures. From there he went to Denver, Colorado, where he gave four lectures at the Fort Logan Veterans Hospital and at the University of Colorado School of Medicine.

* * *

Among the speakers at a meeting of the Missouri State Medical Association at Kansas City in the first week

in April were Dr. D. R. Nichols and Dr. A. M. Olsen, Rochester. Dr. Nichols presented a paper entitled, "Chemotherapy as Used in Medical Conditions," while the subject of Dr. Olsen's address was "Diagnosis and Treatment of Bronchial Lesions."

* * *

April 3 was the ninety-first birthday aniversary of Dr. Christopher Graham, Rochester, and was marked by an all-day celebration that included the presentation of a giant birthday cake at a Rotary Club meeting, a constant flow of telegrams, telephone calls and gifts, and an evening dinner party attended by all members of his family.

* * *

The president of the Northwestern Pediatric Society, Dr. George C. Kimmell, Red Wing, has endorsed the campaign of the Minnesota American Legion to establish a research professorship for rheumatic fever and heart disease in connection with the proposed heart hospital at the University of Minnesota. Goal of the campaign is $500,000.

* * *

Dr. Bruce Boynton, who formerly practiced in Park River, North Dakota, has moved to Ada and opened an office there. Dr. Boynton graduated from the University of Minnesota Medical School in 1944, after which he served in the United States Navy. Upon discharge in February, 1946, he began his medical practice in Park River.

* * *

Dr. J. Arthur Myers, Minneapolis, was a member of a fifteen-man delegation from the United States to the seventh Pan-American Congress on Tuberculosis which began its meeting on March 17 at Lima, Peru. The delegation was headed by Dr. Herman E. Hilleboe, assistant surgeon general of the United States Public Health Service.

* * *

Dr. John P. Cooper, formerly an industrial surgeon at the Minneapolis-Moline Company in Hopkins, has opened offices in the Tonka Building in Excelsior. A graduate of the University of Minnesota Medical School, Dr. Cooper spent two years at the Hospital of the Good Samaritan, Los Angeles, California, before serving in the navy during World War II.

* * *

Dr. Bernard Zondek, professor of gynecology at the Hebrew University in Jerusalem, and co-discoverer of the Aschheim-Zondek pregnancy test, spoke at the University of Minnesota Center for Continuation Study on April 19. He addressed approximately seventy Minnesota doctors recently discharged from the military services, speaking on "Observations on Female Sterility."

* * *

The American Bureau for Medical Aid to China, a co-operating agency of United Service to China, has provided for 125 fellowship awards annually, to enable Chinese doctors, dentists, public health experts, and nurses to engage in advanced studies in leading American universities. After a year of study they will return to China to join the faculties of six national medical colleges that have been selected to receive this assistance.

The Royal Flemish Academy of Medicine of Belgium elected Dr. Frank D. Mann, Rochester, as a foreign honorary member of the organization, at a meeting of the academy in Brussels on November 25, 1946. The election of Dr. Mann was approved by a Decree of the Regent of the Kingdom under the date of January 28, 1947, promulgated in the *Belgian State Journal* of February 19, 1947.

* * *

Remodeling of the long-unused Crosby Hotel building, Crosby, was completed early in April to provide quarters for a new medical clinic opened by Dr. L. N. Dale and Dr. James Nixon of that city. The clinic consists of nine rooms on the ground floor of the building, including offices for both doctors, examining rooms, an x-ray room, darkroom, laboratory and small operating room.

* * *

Acceptance of Dr. K. W. Anderson, Minneapolis, of the newly appointed office of chairman of the Health and Medical Care Division of the Minneapolis Council of Social Agencies, has been announced. Dr. Anderson, a past president of the Minneapolis Academy of Medicine, is the medical directorof the Northwestern National Insurance Company and an associate professor of medicine at the University of Minnesota.

* * *

More than forty public health specialists in the Northwest attended the Middle States Region Health Educators' Conference at the University of Minnesota Center for Continuation Study on April 25 and 26. Health films were shown and panel discussions were held during the business sessions. Governor Luther Youngdahl spoke on "Conservation of Human Resources and Health Education" at the conference banquet on April 25.

* * *

Formerly of Saint Paul, Dr. R. W. Maertz has begun practice in Goodhue, replacing Dr. James R. Weir of that city.

Dr. Maertz, a graduate of Creighton College, Omaha, Nebraska, interned at St. Joseph's Hospital, Saint Paul.

Dr. Weir has moved to Monroe, Wisconsin, and has become affiliated with a medical clinic there.

* * *

Dr. Albert V. Stoesser, clinical professor of pediatrics at the University of Minnesota, and head of the allergy clinics at Minneapolis General and University Hospitals, was a guest instructor at a four-day symposium on allergy held at the University of Kansas School of Medicine, May 5 to 8. Dr. Stoesser spoke on "Hay Fever—Diagnosis and Management" and "Dermatologic Allergy in Children."

* * *

Tribute was paid on March 20 to Dr. Charles W. Mayo by the Rochester Elks Lodge, which selected him at its annual honor night program as an outstanding citizen of Rochester. Toastmaster at the program was Allen J. Furlow, who said of Dr. Mayo: "He has the heritage of a great name, but unless he had what it takes, we wouldn't be honoring him tonight." Mr. Furlow pointed out that the honor "is presented for

outstanding work in the community, the state and, in this case, the nation." He then presented Dr. Mayo with the lodge's token of the honor—a gold clock.

* * *

Dr. J. S. Lundy and Dr. E. B. Tuohy, Rochester anesthesiologists, journeyed to Los Angeles in the middle of April to attend a meeting of the American Board of Anesthesiology, at which Dr. Lundy assisted with the board's oral examinations. While in Los Angeles, they attended a joint meeting of the American Society of Anesthesiologists, of which Dr. Tuohy is president, and the Anesthesia Section of the Los Angeles County Medical Society.

* * *

Dr. W. R. Lovelace II, a former Mayo Clinic staff member, who left Rochester recently to join the staff of the Lovelace Clinic in Albuquerque, New Mexico, has been named physician-in-charge of passenger comforts in high flying by the Trans World Airline. Dr. Lovelace was a colonel in World War II, during which he received international acclaim for his daring parachute jumps from high altitudes—part of a research program in high altitude flying.

* * *

Dr. Miriam M. Pennoyer, St. Louis, Missouri, who was engaged in postgraduate work in pediatrics at the University of Minnesota Hospitals from 1939 to 1944, has been awarded a research fellowship in medicine by the American College of Physicians, and will investigate adrenal function in the newborn at the St. Louis Children's Hospital, under the direction of Dr. A. F. Hartmann of the Washington University School of Medicine.

* * *

Recently Dr. H. S. Diehl, dean of the University of Minnesota Medical School, stated that for some time 30 to 40 per cent of students admitted to the Medical School had had positive Mantoux reactions, and that two-thirds of those who reacted negatively on admission showed positive reactions before graduation. This incidence has now been reduced to 10 per cent. In the last five years only one medical student has developed clinical tuberculosis.

* * *

The association of Dr. Robert H. Conley with Dr. Roger G. Hassett, Mankato, was announced on March 17. Dr. Conley, a graduate of the University of Minnesota Medical School, served his internship at General Hospital in Rochester, New York. During the war he was in the naval medical corps for thirty-eight months, thirty months of which were spent with amphibious forces in the Pacific theater. Following his discharge, Dr. Conley completed a year of postgraduate work in medicine a the University of Minnesota.

* * *

Retirement in March of Dr. A. J. Wentworth, radiologist of the Mankato Clinic, ended a medical career which began in Mankato in 1914. A graduate of the University of Minnesota Medical School, Dr. Wentworth conducted a private practice in Mankato for two years before joining the x-ray department of the Mankato Clinic. In the first World War he served

for two years as a radiologist in this country and overseas.

Dr. Wentworth has been replaced by Dr. W. E. Macklin, Jr., formerly of Litchfield.

* * *

Dr. Benjamin Spock, a pediatric psychiatrist, former member of the Cornell University Medical School, and consultant in child psychiatry in the New York City Health Department, has become a consultant in psychiatry at the Mayo Clinic and an associate of Dr. C. Anderson Aldrich in the Rochester Child Health Project.

Dr. Spock, a graduate of Columbia University, is the author of *The Common Sense Book of Baby and Child Care,* which was published in 1946 and has since been reprinted as *The Pocket Book of Baby and Child Care.*

* * *

Resigning from his positions as professor of surgery at the University of Minnesota and head of the surgical service at the Minneapolis Veterans Hospital, Dr. John R. Paine has accepted the posts of professor of surgery at the University of Buffalo Medical School and chief of the Department of Surgery at Buffalo General Hospital. He will assume his duties there on June 1.

A graduate of the medical school at Harvard University, Dr. Paine also holds the degrees of M.S. and Ph.D. in surgery, both from the University of Minnesota. Dr. Paine has been on the faculty of the University of Minnesota Medical School for ten years. From 1942 to 1945 he served with an army hospital unit in England, North Africa and Italy.

An opening for a young surgeon who has had a year or two in the army, or a year or more of surgical training as a hospital resident, is available, as an assistant project surgeon on a large government construction job at Okinawa. The salary authorized by the War Department is base pay of $6,500 per annum with a possible maximum salary of $7,980 per year. The contract is for one year, and all travel expenses are paid. The project is expected to last from one and one-half to eight years. Living quarters are furnished, and "mess" is obtainable at $1.50 per day. Further information may be obtained by communicating with C. J. Iverson, Aetna Casualty and Surety Company, 1550 Northwestern Bank Building, Minneapolis.

* * *

On March 5, 1947, a bill setting aside $130,500 annually, for providing state aid to counties that wish to employ public health nurses, was passed unanimously by the state legislature. In 1922 the legislature passed legislation enabling counties to employ public health nurses. Forty-nine of Minnesota's eighty-seven counties have voted funds to employ such nurses. At present there are fifty-two public health nurses employed in counties and eighty-six employed by school boards. Although there is a shortage of qualified public health nurses at present, it is hoped that many of the 300 students now securing special training in public health at the University of Minnesota School of Public Health will seek these county positions.

Two Minneapolis physicians have literally made an art of a hobby.

Working at their hobbies during well-earned spare moments, Dr. Carl G. Swendseen and Dr. Robert Wilder have won recognition at painting and sculpturing, respectively. Both have been awarded top prizes in past art contests, and both will exhibit their work again this June in the annual meeting of the American Medical Association in Atlantic City. The exhibit at the AMA convention will be sponsored jointly by Mead Johnson and Company and the American Physicians' Art Association, of which both Dr. Swendseen and Dr. Wilder are members.

Dr. Swendseen began his hobby of painting only four years ago, while Dr. Wilder made his initial attempt at sculpture ten years ago when he first started wood carving. Dr. Swendseen now has a collection of more than fifty of his own oil paintings, and Dr. Wilder has progressed to advanced clay modeling and stone sculpture.

* * *

HOSPITAL NEWS

At St. Mary's Hospital in Duluth a three-man committee is planning a homecoming reunion for former interns at the hospital, many of whom are expected to attend the annual meeting of the Minnesota State Medical Association in Duluth in July. Members of the committee making arrangements for the reunion are Dr. W. J. Ryan, Dr. R. P. Buckley and Dr. K. R. Fawcett.

* * *

Announcement has been made by the hospital board at Blue Earth that donations of several pieces of equipment have been made for use in the local hospital. Included in the equipment are an electric blanket, a supply table and an instrument sterilizer. Further contributions, the board stated, would be gratefully welcomed.

* * *

Dr. Jorge Lazarte, Rochester, has been appointed assistant superintendent of the Rochester State Hospital.

Dr. Lazarte, who came to Rochester in 1941 from Lima, Peru, has an M.A. degree in neurology from the University of Minnesota, and has served five years on a fellowship in the Mayo Foundation, majoring in neurology and psychiatry. He joined the staff of the state hospital in July, 1946. In addition to his local duties, Dr. Lazarte represents the Peruvian government on the United Nations committee for drug control.

* * *

Following the grant of a hospital permit to Greenbush by the Federal government, officers and committee chairmen of the Greenbush Hospital Association have been announced. Officers are William Anderson, president; W. O. Gordon, vice president, and I. S. Folland, secretary-treasurer.

Committee chairmen are Herbert Reese, building; W. O. Gordon, medical; R. W. Huggett, health insurance, and William Paulson, executive.

A delegation of Brainerd representatives in March appealed to the Civilian Production Authority in Minneapolis to reconsider a request for vital materials for St. Joseph's Hospital in Brainerd.

The delegation was formed after the Authority had rejected a request for materials with which to build a $50,000 service building and heating plant on the hospital grounds. Engineers had previously informed the hospital authorities that unless a new heating plant is installed, the institution might be required to close next winter.

Included in the delegation were Dr. John Thabes, Sr., chief of the hospital medical staff; Lester Hage, chairman of the Brainerd Civic Association, and Norris Ryder, secretary-manager of the association.

* * *

The initial step toward the construction of a hospital at Isle was taken on March 10 when a citizens' committee of Isle met with Dr. Viktor O. Wilson and Ether McClure of the Hospital Licensing Division of the State Department of Health, to discuss possibilities for a hospital in that area. At the meeting Dr. Wilson suggested that a committee be organized to investigate the various aspects of the problem and to obtain the necessary preliminary information for hospital planning.

* * *

Increased efforts to reach an understanding between the hospital boards of St. Luke's and Mercy Hospitals, Thief River Falls, were made by members of the Civic and Commerce Association at their March 6 meeting after the reading of an architect's report dealing with methods for expanding hospital facilities in Thief River Falls. Although the detailed report was not made public, it did recommend that an addition to St. Luke's Hospital would be the least costly means of providing extra facilities.

Association members pointed out the need for a prompt settlement of differences between the two hospital boards if the city were to become eligible for Federa financial aid. It was suggested that the services of a hospital consultant be secured to survey the local situation, with the understanding that the two boards be guided by his recommendations.

Among the speakers at the meeting were Dr. M. D. Starekow and Dr. Theodor Bratrud.

* * *

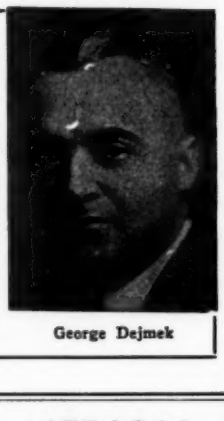
A community auction, with items contributed by Zumbrota townspeople and farmers in the area, was staged on May 1 as part of a drive to raise funds for the construction of a municipal hospital at Zumbrota. Objects placed on the hospital auction block ranged from tractors and refrigerators to farm produce and household goods.

Proceeds from a noon lunch and an evening dance were added to the auction receipts and to funds obtained by individual solicitation, in an effort to reach the $35,000 total anticipated before the event by the local planning board.

* * *

A report of the interim committee appointed by the 1945 legislature to study needs of the mental hospitals of the state, submitted to the legislature in March, emphasized the over-crowding in all seven of the state mental hospitals.

The report indicated that at least 2,000 additional beds are needed to meet present needs, and proposed a building program that would provide $16,854,000 in improvements over a period of ten years. At the St. Peter State Hospital, for example, rebuilding of administrative offices, kitchen, bakery, steward's offices, warehouses and wards, would cost about $2,910,000, while erection of two buildings, each to house 150 senile patients, would require an additional $800,000.



George Dejmek

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

OBSTETRICAL PRACTICE. Fourth Edition. Alfred C. Beck, M.D. Professor of Obstetrics and Gynecology, Long Island College of Medicine; Obstetrician and Gynecologist-in-Chief, Long Island College Hospital, Brooklyn. 966 pages. Illus. Price, $7.00, cloth. Baltimore: Williams & Wilkins Co., 1947.

RH—ITS RELATION TO CONGENITAL HEMOLYTIC DISEASE AND TO INTRAGROUP TRANSFUSION REACTIONS. Edith L. Potter, M.D., Ph.D., Assistant Professor of Pathology, Department of Obstetrics and Gynecology, the University of Chicago and the Chicago Lying-in Hospital. 455 pages. Illus. Price, $5.50, cloth. Chicago: Year Book Publishers, 1947.

NUTRITIONAL AND VITAMIN THERAPY IN GENERAL PRACTICE. Third Edition. Edgar S. Gordon, M.D., Ph.D. Associate Professor of Medicine, University of Wisconsin. 410 pages. Price, $5.00, cloth. Chicago: Year Book Publishers, Inc., 1947.

PHYSICIAN'S HANDBOOK. Fourth Edition. John Warkentin, Ph.D., M.D., and Jack D. Lange, M.S., M.D. 272 pages. Illus. Price, $1.50, paper cover. Chicago: University Medical Publishers, 1946

RADIOLOGY FOR MEDICAL STUDENTS. F. J. Hodges, I. Lampe, and J. F. Holt. 424 pages. Illus. $6.75. Chicago: Year Book Publishers, 1947.

The authors, who are members of the Department of Roentgenology of the University of Michigan, have produced a more complete work than the title implies and have understated themselves in speaking of it as a "limited treatise." This book is in two parts; one concerns diagnostic roentgenology and the other x-ray and radium therapy. Either part could stand on its own merits. In the section on therapy, emphasis is placed on the clinical indications and probable results. Every doctor should be familiar with these aspects of therapeutic radiology and information on the subject of the type presented concisely in this work is not generally available. Of interest is the fact that, excluding dermatologic conditions, 40 per cent of the x-ray therapy patients at the University of Michigan have benign conditions.

The first portion of the book takes the reader through a brief history of medical roentgenology with a discussion of the generalities of equipment and the methods of roentgenology, and defines the position of roentgenology as a specialty, and the radiologist. The diagnostic section represents the major portion of the book and is excellently prepared and presented with regard to the clinical aspect of x-ray diagnosis. Controversial subjects are covered dogmatically enough for the beginner but are free from prejudiced conclusions to serve the more advanced reader. The limitations of x-ray diagnosis are mentioned. A bibliography is appended to each chapter.

The publishers have again done an outstanding job in the reproduction of actual radiographs used in the illustrations. This book should find wide acceptance.

L. A. NASH, M.D.

EVERYDAY PSYCHIATRY. John D. Campbell, M.D., Commander, MC, U.S.N.R., Chief Neuropsychiatrist, U. S. Naval Base Hospital No. 8. Formerly Chief Neuropsychiatrist, U. S. Naval Hospital, Charleston, S. C., and Visiting Lecturer in Psychiatry, Medical College of South Carolina, Diplomate American Board of Neurology and Psychiatry. 333 pages. Price $6.00, cloth. Philadelphia: J. B. Lippincott Co., 1945.

The author states that this book "seeks to fill a gap between medicine and psychiatry." He opens Chapter I with the following paragraph: "In an endeavor to present psychiatry to practicing physicians, medical students, and social workers in a usable practical manner, I have concluded that the most expedient approach is

through the abnormal personality types. These milder mental aberrations constitute 90 per cent of the private practice of psychiatry, a large percentage of military psychiatry, and approximately 30 per cent of all patients who consult physicians in general. Ten per cent of the selectees rejected for military service are rejected because of these borderline mental conditions." This statement indicates the type of and prevalence of the abnormalities discussed in the book.

Mental deficiency, psychopathic personality, psychoneurosis, homosexual personality, schizoid personality, and cycloid personality are each discussed under the following headings: intelligence, conscience and work record, emotional stability, socialability, psychosexual development, and special modes of adjustment. In addition, the etiology and treatment of each of these entities are considered. Chapters on chronic alcoholism, personality examination, and rehabilitation, are included.

Early in the book the reader gains the impression that the four basic personality traits which he describes, intelligence, conscience, emotional reaction, and psychosexual development, as well as two secondary factors, sociability and special modes of adjustment, "are inherited, constitutional and immutable, and are not subject to change by environment, education or training." This attitude may well discourage the reader from perusing it further. Actually, as indicated above, considerable material is devoted to treatment and rehabilitation. It would appear that the more optimistic attitude developed as the material is presented is the correct one.

Although the section on mental deficiency and the attitude that the autonomic nervous system and the endocrine glands are not modifiable by environmental factors will meet with adverse criticism from many readers, the references to the literature and the content of the work as a whole are deserving of commendation.

This book is easily read and is worthy of the careful consideration of those to whom it is addressed.

WALTER P. GARDNER, M.D.

Classified Advertising

WANTED—Physicians, class A graduates, with or without psychiatric experience, licensed in Minnesota or will obtain Minnesota license promptly. Full maintenance. State Hospital, Moose Lake, Minnesota.

FOR SALE—Active general practice; office equipment; home in Minnesota town, 1800 population, 90 miles north of Minneapolis. Large territory. No opposition. Address E-12, care MINNESOTA MEDICINE.

POSITION WANTED—Young physician desires position as associate with another doctor in Minnesota town, or will purchase practice. Addres E-15, c/o MINNESOTA MEDICINE.

WANTED—Assistant for general practice with view to permanent association by doctor with excellently equipped small clinic. An internist or physician with special training preferred. Give qualifications and references. Address E-16, c/o MINNESOTA MEDICINE.

FOR SALE OR RENT—Desirable building suitable for doctor's office. Small Minnesota town; twelve miles from hospital; large territory, unopposed practice. Address E-17, c/o MINNESOTA MEDICINE.

FOR SALE—One white enamel office operating or examining table. Leather padded. Adjustable stirrups. Come and take it away at any reasonable price. J. H. Haines, M.D., 2nd and Burlington Streets, Stillwater, Minnesota.

WANTED—Resident physician. Immediate opening in old, established hospital in Saint Paul. Salary is open. Address E-18, c/o MINNESOTA MEDICINE.

DOCTOR WANTED—To take over general practice of deceased physician; established 25 years. Office equipment, records, drugs, medical library included. 120 miles north of Saint Paul. Address E-19, care MINNESOTA MEDICINE.

WANTED—Young physician to work with a group of four physicians in Central Minnesota. Address E-20, care MINNESOTA MEDICINE.